

# Closing The Gap

APRIL / MAY, 2011  
VOLUME 30 - NUMBER 1

*Solutions*

**ARRA FUNDS: HOW'S THAT WORKING FOR YOU?**

**DISCOVERIES - NEW SOFTWARE, DVDS AND PROFESSIONAL RESOURCES**

**TIC TAC TOE: A COMPLICATED GAME OF CONNECTING THE DOTS**

**TOOL REVIEW: LIVESCRIBE ECHO SMARTPEN**

**SOCIALLY OPTIMIZING SOLUTIONS**

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Cover photo: Techno Camp 2010. Photo submitted by Mark Coppin, Assistive Technology Director, Apple Distinguished Educator Anne Carlsen Center, Jamestown, ND.

# Closing The Gap

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# SOCIALLY

## Optimizing Solutions

By Mo Buti

**W**hen we hear about interacting socially, many of us think of a party or a family get-together. But how many times a day do we have to talk to someone for even the most basic tasks of everyday living. Going to the grocery store, buying lunch or just catching the right bus can often lead to an exchange with someone else. During these quick, but often consequential, brief encounters, so much is communicated even without words. We often don't realize just how much is said without much being "said." How we go about these "simple" interchanges has many complex cues that we often take for granted.

**Social interaction requires the shifting back and forth** from listening to responding, and may even include more than one other party on the listening end. It also requires eye contact and many other physical displays. One must also rapidly establish and shift attention. And where do you look? At the person talking or the other person listening to see their reaction? Many students with autism have difficulties accomplishing and recognizing these skills at speeds necessary to participate in social interactions. The many cognitive resources that we draw on in

these situations have not been developed by most of our students.

During a typical conversation, much of the information is communicated non-verbally. Sometimes, more is being said from the way we hold our bodies, stand or where we put our arms. What about the raised eyebrows or the smile, or exasperated release of air? It has been said that over half of what is understood between people comes from the body and the face. Also, auditory information disappears before some students even have a chance to respond.



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Processing all this information at once can seem overwhelming even to the most adept socialite.

There are many types of deficits in the social skills area. Social avoidance is the most common and can be result of many factors. This is where a child may shy away from or escape social situations. This may be due to sensory issues. Some situations may be too over-stimulating: too loud, or have too many senses involved simultaneously. Secondly, many students within the autism spectrum do not see the need to socially interact with others. Children with autism often have interests they can do in isolation: twirling a string, lining up objects, playing on the computer, looking up facts, etc. With these "restricted interests," they may see no need to be interacting with others. Some students may also have interests that are different from their age-appropriate peers. For instance, a student with autism at kindergarten age may really enjoy taking about how a train is built and all the facts that come with that. Typical kindergarteners may not share this interest, but rather they may be into just playing with toys.

Other students, although not averse to their peers, may show a social indifference. These students will not actively seek interactions nor avoid them, but often just find themselves with others and may just "go along" with what they see. This may be because they do not know how to socially interact or are just not comfortable with this particular cohort.

Some students with autism desire connections with others, but come to be viewed as "socially awkward." These students may try to gain friends though they lack the ability to reciprocate in conversation or communicate their common interests. Many students with autism have interests that are different from their peers. Some students may have unique or unusual interests or some may just have interests that are not age appropriate (either too young or that of an older child). These students may not have developed appropriate social skills, know all of the social rules or understand the social cues that are used to foster a comfortable social engagement.

Good social awareness is also useful when dealing with an adult or authority figure. Navigating through a school environment requires interacting with groups other than their age-appropriate peers. A student not only needs to read the social cues from their classmates but also their teachers. For example, a teacher might be obviously mad and have their arms crossed with an angry look on their face, though a

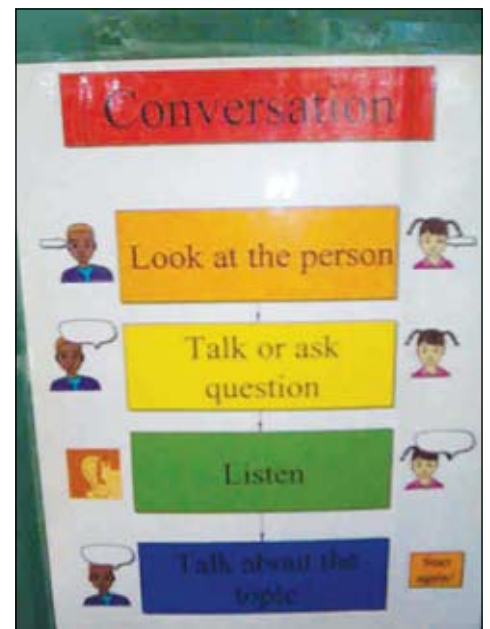
child with autism may not read it as "the teacher is upset with me." At times, these students might also come across as rude. For example, telling someone that they are fat is an insult. Though to a literal mind, that would be just a simple observation. In these cases, what needs to be taught is how to decide what is acceptable to say, when it should be said (if at all) and how it should be said. Most of us have a social "filtering system" that allows us to say or communicate only what we feel would be acceptable.

Many of our students have difficulty decoding language and social cues. The English language by itself can be very confusing and presents many contradictions. Many words have multiple meanings, and if you include sarcasm and idioms, the English language is difficult to make sense of even for the most adept native speakers, let alone the literal minded. Educators need to expose children to many of the most common words and statements as often as possible and in a variety of contexts.

## NOW WHAT?

Now that we have categorized many of the deficit areas a child with autism may have, we can look deeper into how to teach children to overcome these areas or become more proficient in these areas. Start with the basics of social interaction. This begins at a young age. Joint attention is one of the early skills needed to be socially successful. This is the ability to share attention with another person while both people are paying attention to the same object. Create situations in which joint attention is more likely to occur (e.g., reading a book, pointing to pictures, naming pictures, and looking at child and book). Set up these situations within play experiences. Do surprise play in games, like peek-a-boo and hide and seek.

Early play skills would be the next step in teaching social skills early on. Make play as predictable as possible. By adding a physical component, the child has more anticipation (e.g., 1,2,3 ... then tickle). Creating a physical and mental component to the game increases cognition. Imitation with the same objects is the next step in developing proper play skills. Cause and effect toys are good to use. Next, teach there are multiple uses for the same object or toy (e.g., a block can be used as a car or a block can be used to build a house). Adding a second toy into this play begins to teach imaginary play skills. Playing with peers would be the next step in developing early play skills. Once a child is at this stage, slowly introduce peers. Start with the children in the same room.



A visual strategy for conversation



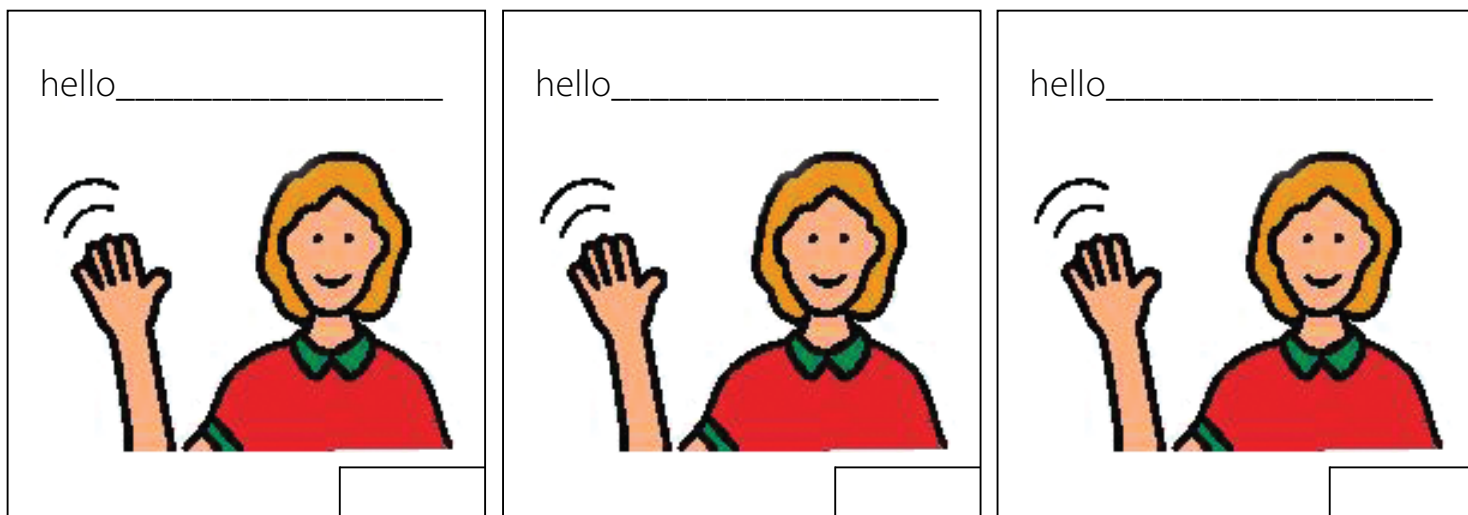
Thought bubbles are a visual strategy used to teach students what is ok to say, versus what you might just think, but not say.

Once this is successful, have the children side by side, using the same materials. Then have the children side by side, sharing materials with structure from an adult. Next, have the students play simplified games, such as modifying a memory game where the cards are all face up.

We teachers and educators have many tools at our disposal. These students' cognitive functions rely heavily on visual input. It is important to create a visually rich environment. This would include a variety of visual cues, scripts, schedules, video modeling, social stories, lists and role playing.

## SOCIAL STORIES

There are many specific strategies and modifications to teach social skills to children with autism. The use of the student's visual strength and special interests will make teaching social skills more successful. Visual supports are great strategies to use when teaching children with



An example of scheduling social situations right into a child's schedule.

autism. Make social situations as visual as possible. Providing a visual script, social script, or Carol Gray's Social Stories can be useful many situations (Gray, 1994). A social story is a tool for teaching social skills. The stories provide accurate information in first person and present tense about situations that may be found difficult or confusing to the student. The stories describe the situation, the social cues and what is expected from the child and why. They help increase understanding for the child, help with comfort level and suggest appropriate responses. These stories have also been used to increase theory of mind, the understanding of other people's thoughts, feelings, reactions and expectations. This understanding increases children's success in social situations.

Social stories can be modified using Boardmaker (from Mayer Johnson), Writing With Symbols (from Mayer Johnson), pictures drawn, clip art, videos and photographs. Modifications should be chosen with the student's learning ability and motivations in mind. All the student's social stories should be read at a particular time everyday. In addition, stories should be read before the behavior occurs, if you know when the behavior will occur. Stories for specific behaviors, such as lunchroom behavior or recess behavior, can be read before they occur. Yet others, such as "saying nice words," are difficult to time. For these behaviors, read the story as soon as the behavior occurs. The stories should be rehearsed and practiced continuously. The philosophy is that these stories become rote memory and the student will act upon the script in the story when the situation arises.

## VISUAL SCHEDULES

Additional ways to make social situations occur due to visual supports would include the use of a visual schedule. Provide a child with a schedule that has a particular social interaction embedded right into it. For example the first thing on the student's schedule should be to greet three peers. The visual may state, "Hello Mary, hello John and hello Mark." The names, of course, should reflect actual students that the child would encounter. The child would then take this off of his schedule (make the schedule with Velcro-backed, removable pieces) and go to these people and say hello. Another example is providing the student with a visual cue card to go along with various classroom routines. For example, when the student completes their work, they would take this along with their cue card to the teacher. While handing their assignment to the teacher they would also read their script that might say, "Ms. Johnson, I am finished." A child can also have "paper passing" scheduled into their day. When they pass out papers, they can have a verbal script where they have to say "here is your paper, Laura," and the student responds appropriately. The other students would be trained on strategies to encourage multiple reciprocal verbalizations.

Another use of a schedule can be during recess. The student can be provided with a small card that has the order of equipment that they should go on, complete with pictures. Or, the student can carry a small card that prompts him/her to engage with their friends, though also allowing them time to be on their own if they wish. The card could have a "me time" and "friend time" schedule.

## GROUP WORK

Working in a group can be difficult for some children with autism for a variety of reasons. For one, some may not understand the purpose of the group. Why are all these people talking about this subject? And why do they keep looking around at each other? These are some of the questions that may arise. Secondly, the student may feel that they are smart enough to complete the task themselves and do not need the additional assistance of the group members. Others may interpret the scene too literally and feel it is a form of cheating, not understanding the collaborative process involved in group problem solving. This student needs to be aware of exactly what their role is within this group. Providing a visual description or list of everyone's roles within group can be very helpful. In addition, this child may need such specific visual guidelines as to their tasks for their particular role (e.g., write down two things that everyone in your group says).

## SABOTAGING THE ENVIRONMENT

Sabotaging the environment is another way to encourage social interactions. As an educator, one should always be thinking of ways in which we can set up or solicit social interactions. Think about every activity during the day and how you can promote this. For example, if you are doing an art project, pass out the supplies to all students, while purposefully overlooking the student you are trying to encourage to interact. Place the extra supplies adjacent to the student. Then wait. Observe. Provide prompts, if necessary. Provide a point prompt towards the extra supplies. Provide a verbal prompt, if necessary. The final result you are looking for is for the student to

ask an adjacent peer for the supplies. You can set situations like this up during many different types of activities. Keep in mind that the peers should understand the function for doing this, so that they do not think you are being mean to the student you are trying to encourage to interact with their peers.

## WRITING NOTES

Think about what you did when you were younger to interact with your friends. Did you ever write you friends a note? You may have passed notes in class, though I am not suggesting to pass notes during class per say, there is a time and place. Note writing is a wonderful way to encourage age appropriate social interactions. This process can be very successful for children on the autism spectrum. It slows down the interaction process, it uses their visual strength and it makes it obvious whose turn it is. When a note is given to a peer, it is now their turn, when a note is received it is then that child's turn. It slows down the process so that the student can process all information needed before responding. Modifications can be used for note writing as well. E-mail can be used. (ebuddies.com)

Filling in blanks can be done. Drawing pictures and dictating can also be used to make note writing more successful.

## VIDEOS AND VIDEO MODELING

Videos and movies can be powerful tools to teach social skills. Children with autism respond well to video due to the consistency. It is the same voice, same words and same body language every time the video is watched. This consistency allows for the child to truly learn the skill exactly one way, practice it, review it, watch it again and again and model what they see and hear. Many students with autism have special interests that may even include movies. These can be used as a tool. This movie can be viewed by the student. Certain parts of the movie may show a good example of a social interaction, a facial expression or an appropriate verbal response that can be used as a teaching tool. The movie can be viewed, stopped, rewind, viewed again, modeled and discussed. Children can also learn from video modeling. The child can be video taped and this video can be viewed by the child so they can see how it looks, what they may need to change and can be redone. Once the skill is performed

correctly and video taped, it can be used as a tool to view when needing to practice the skill. Peers can be used to make videos as well. Role playing and practicing can be done with these videos. Many times this teaching strategy is more effective when the child views themselves or someone they know in the video.

What all of these students need is to be taught the "rules" of socializing. All of the protocols and habits that we take for granted need to be carefully and thoughtfully conveyed to our students. In addition, providing a list of the reasons why and how you can socially interact is helpful. And finally, role playing and practicing a variety of different social interactions can provide students with a better understanding as to why and how to socially interact. Practice and repetition are critical attributes of social skill instruction for students with autism. Social skills require explicit instruction and practice. There are teachable moments that occur throughout the whole day. Capture these moments, utilize the student's visual strength, utilize the student's interests whenever possible and, most importantly, have fun with it! ■

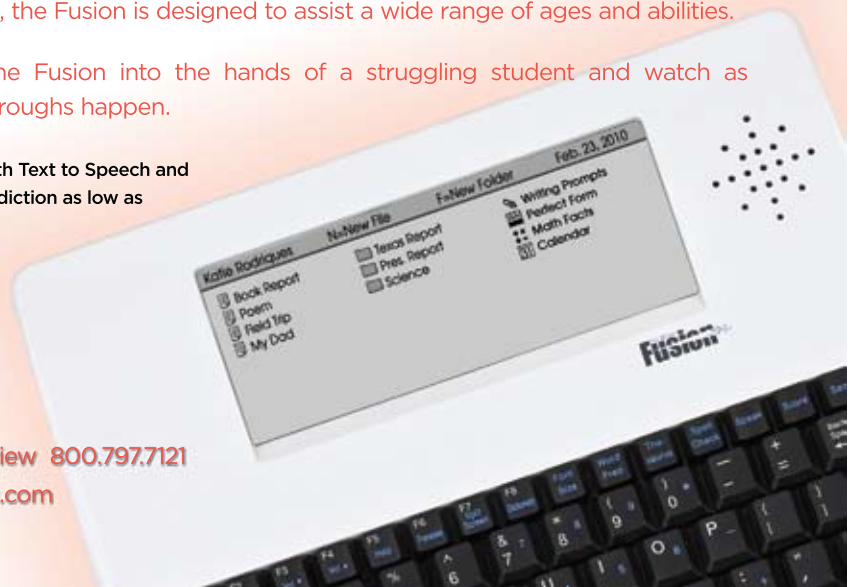
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# ARRA Funds: How's That Working for You?

By Major Simms

## The dream to provide the right technology to enable special needs students to succeed sounds like a great fairy tale.

Everyone knows that monies are limited and with other needs for special children, technology moves down the list. In Putnam County Schools, technology has come a long way. Most classrooms have at least four student desktop computers and a wide variety of other technology toys. Sounds like a great environment for learning, except for one small problem. If you look in the special education classrooms, you would not see the same technology opportunities. This is not unique to our county. Across the country, there seems to be a disparity among the “have’s and the have not’s.” Usually the reason why is the same. It takes money and good planning to pull it off. For several years, our special education department had been attempting to equip the classrooms with technology. Our director was gifted in writing grants, but that only went so far. In order to keep the dream alive, we needed to find funds, but the well was always dry. Then, a once in a lifetime opportunity arrived in the form of the American Recovery and Reinvestment Act of 2009 (ARRA).

The Laptop Project began one afternoon with the unexpected announcement that ARRA Funding was headed our way through the West Virginia State Department of Education. Like most news, it came with good and bad news. The funding source would only last for two years and the accountability factor was quite high. Like a kid in a candy store, I began the search for technology tools to enhance the learning process for

the students. After utilizing the Web, pouring through several catalogs and finally coming to the understanding that this Project would not be easy, the Laptop Project began to take shape. The key to the successful implementation of the Laptop Project was the ability to spend the time necessary to compile the needs and then use problem solving to avoid the pitfalls. We needed a plan.



**MAJOR W. SIMMS, JR.** has been an educator for over 34 years. He has been a classroom teacher, Educational Diagnostician, and a Technology Integration Specialist. He is married to Lynnette, a classroom teacher, and has three children and three grandchildren. He is a trainer of the Learning Strategies from the University of Kansas, Intel® Education thinking tools trainer, motivational speaker, and a “Mac” guy. You can follow him on twitter @mwsimms, read his blog “Techno Educator” <http://techoeducator.blogspot.com/>, or visit his web site at <http://boe.putn.k12.wv.us/tis/index.html>. E-mail: [mwsimms@gmail.com](mailto:mwsimms@gmail.com)

# Implementation Monitoring Plan: Assistive Technology

School District:	Building:
Technology Innovation:	
Target Implementation Date:	

Implementation Monitoring Team	
Name	Role
	Team Leader

Assistive Technology Device or Service	
Equipment or Software	Status (owned, needs to be purchased, on loan)

Prerequisite Tasks (Purchase software or device, license software, load software, scan text, check computer compatibility, obtain district / building/teacher, commitment, etc.)		
Task	Person(s) Responsible	Date Due
<input type="checkbox"/>		
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<input type="checkbox"/>		
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Adapted from Bausch, M. E., Ault, M. J. & Hasselbring, T.S. (2006). Assistive technology planner: From IEP consideration to classroom implementation. Lexington, KY: National Assistive Technology Research Institute. Adapted with permission.

<b>Professional Development</b>				
Need	Audience	Instructor	Date	Follow up Plan

<b>Building/Classroom Implementation</b>			
Support needed (e.g. training, materials, etc.)	Curriculum Area (e.g. reading, science, etc.)	Person(s) Responsible	Hardware/Software (software, scanner, etc.)

<b>Student Implementation</b>			
Support needed (e.g. training, materials, etc.)	Curriculum Area (e.g. reading, science, etc.)	Person(s) Responsible	Hardware/Software (software, scanner, etc.)

<b>Home Implementation, if included in the IEP</b>			
Support needed (e.g. training, materials, etc.)	Curriculum Area (e.g. reading, science, etc.)	Person(s) Responsible	Hardware/Software (software, scanner, etc.)

Adapted from Bausch, M. E., Ault, M. J. & Hasselbring, T.S. (2006). Assistive technology planner: From IEP consideration to classroom implementation. Lexington, KY: National Assistive Technology Research Institute. Adapted with permission.

The M.A.J.O.R. Plan provided the process to make the “dream” come true with the end result of creating a technology environment for our special education staff and students.

## MANAGE THE FUNDING SOURCE

### Assistive Technology Implementation Plan

This step is more than using a spread sheet and bean counting. According to the ARRA funding requirements, the monies had to be divided into hardware for teachers and students, software for teachers and students and, finally, training. Each category had to be equal in order to show that equality would take place. I also understood that without

the training component, The Laptop Project would not be successful. Our long term goal was to provide technology for our teachers and students. Our short term goal was to make sure we didn't lose focus and just spend the money on items we didn't really need. There was a great temptation to take advantage of all the “ARRA Package Deals” that we were inundated with from tech companies. Even our State Department of Education provided us with several packages designed to aid in the process of spending the monies. While many of the suggestions were great, we decided to slow down and use our new found source of funding to our advantage. A lot of leg work went into this step. We found that most teachers would utilize the technology, as long as we didn't throw it at them. They needed the time to learn how to use it and we took the time to problem solve.



Older Technology (overhead projector) gives way to the ELMO



Presentation at State Technology Conference. Showing off toys

## ANALYZE THE NEED USING ASSESSMENT TOOLS

While there are several types of assessment tools, it became very clear that the best indicator of need was right before our eyes. We decided to begin the process by providing the teachers with the basic tools. A laptop, video projector and an ELMO Document Camera were the first stage. This decision was based on the requirement for teachers to document attendance and grades, develop IEPs using the ONLINE IEP Program, and allowing them to use one computer and a projector for whole group instruction. The selection process was also enhanced with attendance at the Closing The Gap Conference. This gave us a chance to see vendors and equipment that was designed for the populations we were serving. The chance to interact with the vendors, attend sessions and finally sharing experiences with other educators proved to be the best expenditure of money. During the conference, I attended one session titled, “Implementation of Assistive Technology using Monitoring Plans.” Presenters introduced a form that would allow you to monitor the usage of hardware and software. The purpose of the monitoring form was to provide all details of the plan and allow all parties involved in the implementation of the assistive technology to be monitored. It would also help guide us to the next stage of The Laptop Project. Our motto was “Inspect What You Expect.”

## JOINTLY UTILIZE EXISTING TECHNOLOGY RESOURCES AND PERSONAL

Putnam County Schools has a great technology department. It is staffed with hard

## By the numbers, the Laptop Project included the following items

138 laptops and cases .....	<a href="http://www.pomeroy.com/">http://www.pomeroy.com/</a> .....	\$109,824.00
68 multimedia projectors .....	<a href="http://www.pomeroy.com/">http://www.pomeroy.com/</a> .....	\$33,000.00
25 printers .....		\$2,375.00
90 ELMO's .....	<a href="http://www.elmousa.com/">http://www.elmousa.com/</a> .....	\$45,000.00
15 student computers .....		\$8,235.00
8 touch screen monitors .....		\$2,856.00
15 NEO2 portable keyboards .....	<a href="http://www.renlearn.com/neo/NEO2">http://www.renlearn.com/neo/NEO2</a> .....	\$2,235.00
5 Text to Speech Neo .....		\$1,495.00
10 digital cameras .....		\$880.00
3 Reading pens .....	<a href="http://www.enablemart.com/">http://www.enablemart.com/</a> .....	\$689.85
5 Livescribe Pens .....	<a href="http://www.livescribe.com/en-us/">http://www.livescribe.com/en-us/</a>	
10 Wiimote Whiteboard Systems .....	<a href="http://penteractive.us/main/">http://penteractive.us/main/</a>	
5 Flip Video's .....	<a href="http://www.theflip.com/en-us/">http://www.theflip.com/en-us/</a>	
10 sets Headphones .....		\$291.00
4 Vantage Lite Augmentative Devices .....	<a href="http://www.prentrom.com/">http://www.prentrom.com/</a>	
60 spell checkers.....	<a href="http://www.merriam-webster.com/">http://www.merriam-webster.com/</a> .....	\$841.00
60 media carts .....		\$5,400.00
3 digital voice recorders .....		\$129.00
Ethernet cables .....		\$60.00
<b>Software:</b>		
Boardmaker Plus .....	<a href="http://www.mayer-johnson.com/boardmaker-plus-v-6">http://www.mayer-johnson.com/boardmaker-plus-v-6</a> .....	\$235.00 each
WordQ SpeakQ .....	<a href="http://www.goqsoftware.com">http://www.goqsoftware.com</a> .....	\$1,490.00
Acuity Unwired .....	<a href="http://www.acuityforschool.com/">http://www.acuityforschool.com/</a> .....	\$7,000.00
Microsoft Office .....	<a href="http://office.microsoft.com/en-us">http://office.microsoft.com/en-us</a> .....	\$7,809

working techs and specialists and a director with a focus on moving us into the 21st Century. It became clear that working closely with the exiting staff would prove to be the right move. The Laptop Project was going to be a huge undertaking and would require a clear focus and the entire resources of the county. The joint effort proved to be the key to successful implementation. A very important part of the project involved the hiring of a full-time special education tech to focus on training and support. It became very clear that unless you are ready to commit the funds and manpower to help the teachers learn and implement technology, it will fail. We made a very important decision at the beginning of the project that the usual practice of throwing money and technology at teachers and students will not equal success. Unless you are prepared to spend the time and effort, utilize existing resources and, finally, keep it "student-focused," it will not work.

### OFFER ADEQUATE TRAINING

If there is any component that stands out as the number one priority, it has to be adequate training. So much time and energy is usually spent in deciding what technology to buy and what goes where. If you talk to most teachers, they will tell you that not only do school systems not spend time training their personnel, but there is usually little or



Teachers using their laptops for additional training

no follow-up. This can spell trouble for you if you do not invest time, money and energy offering adequate training. I keep telling our staff that if we expect them to use the technology in their classrooms, we must provide training. Not only does this include hands-on training, but also training with application. "Now that I have this technology, what do I do with it?" During the beginning of The Laptop Project, we made it a priority to provide training session on the following topics: "The Care and Feeding of your Laptop,"

"One Laptop + One Projector = Whole Classroom Technology Instruction," "Utilizing the Web for Instruction" and, finally, "What Can Google Do for Me?" As the process went on, it became clear that other types of trainings were necessary to make sure all school personnel were able to utilize technology and begin the process of integrating technology into the curriculum. Before leaving this stage in the process, I must underline that training is on-going. As new technology is created and students becomes more tech

savvy, your system must embrace the development of application for the new technology. Teachers really do not have the time to develop and integrate technology into daily classroom instruction. They will be more excited about using their new “toys” if they have practical application. During our pre-stage in the project, one thing that we found out was that most teachers and parents do not have the time for training during the school day. There is a Web site dedicated to assistive technology. “Technology in the Classroom” <http://boe.putn.k12.wv.us/tis/index.html> focuses on news, application, and more important, a way for teachers and parents to receive the training without being there. What we have found out is that once an in-house training has taken place, most teachers want to revisit the information. The Web site contains all the training material so the refresher or review can take place anytime. This has also saved us time with tech support. Another way of providing technology help is through Google Groups. Teachers are sent a request to join and the private forum provides information concerning the select topic and allows them to ask questions. It has become the “Help Desk.”

“

**To answer the question of where do we go from here, you really have to focus and be powered by a strong and thorough reevaluation process. This process should include the following framework:**

- Inventory of existing hardware and software
- Compile a “wish list” by surveying the district staff
- Get feedback from participants about successes and barriers
- Establish a method of collaboration

”

**REEVALUATE THE PROCESS**

The big question in any process or project is, “Where do we go from here?” One thing that we found out during our first year of The Laptop Project was not to lose sight of where we wanted to be this time next year. Our director, Patricia Homberg, has been very supportive of the project and through her guidance, we have established a great technology foundation. Strong leadership is very important and insures quality decision-making. To answer the question of where do we go from here, you really have to focus and be powered by a strong and thorough reevaluation process. This process should include the following framework:

- Inventory of existing hardware and software

- Compile a “wish list” by surveying the district staff
- Get feedback from participants about successes and barriers
- Establish a method of collaboration

The inventory should focus not only on items recently purchased, but also existing items. Many times you will find that there are several pieces of technology or software that need to be replaced or could benefit someone else. A wish list is a great way to find out about new technology and what people really want to use. Make sure they have the understanding that this

list is just that, a list of possible items that you might focus on during the next stage of the project. Feedback is very important and will provide you with insight and drive the next stage. Not only is it a list of pluses and minuses, but also an indication of how each teacher used the technology. While you never want to remove any item from someone who is using it, you also don’t want to let it just sit on the shelf. Finally, establishing a method of collaboration will give you the greatest chance of continuing the successes. We do not collaborate well in education. So often great ideas are not shared and we miss out on true innovation. A great way to collaborate is to share ideas through a Web site or blog, or by using a platform like Google Groups. Once again, using free or low-cost resources works best. We also found ways to cut cost and still provide quality training and instruction. Justin TV (<http://www.justin.tv/>) provided a platform for using live streaming of training sessions, developing a way to share files without using the county server system with Evernote (<http://www.evernote.com/>), and finally, developing a “brain trust” through collaboration. When we brought the teachers together, it became apparent that once teachers became comfortable with technology, the more innovated they would become.

The Laptop Project has provided our district with a shot of technology adrenaline and a commitment from our teachers to build on our successes. The sky is the limit. Let me end with one comment from a teacher who at first would not even come to the premier training, “While I do not really understand all the technology, the one thing I do know is the smile on the faces of my students when we use it.” ■



Director, Patricia Homberg, providing guidance for “The Next Step” process

# DISKoveries

## Special Needs: New Software, DVDs and Professional Resources

By Joan Tanenhaus

**Editor's Note:** Part two of *DISKoveries: Apple iPad and Apps for Special Needs* will appear in the June/July, 2011 edition.

### Switch Skills 2 & Switch Skills 3

(Inclusive: [www.inclusivetlc.com](http://www.inclusivetlc.com)) Both of these excellent new programs from Inclusive are designed to practice and improve switch timing skills. They include simple activities to use with a single switch – great for those who have cause and effect concepts but need to practice switch timing and understanding computer cues. They are also excellent to use for attention and focus. Activities will appeal

to a wide range of ages and visual and cognitive levels. All activities have options to adapt them to individual needs or to allow you to develop each learner's skills in small steps. These include cue sounds, penalty sounds, reveal time and position on screen. Switch Skills 2 has 20 activities, in five different areas. In the easiest activities, the opening screen is blank and the learner must wait for something to appear, and then press a switch or touch the screen to get an animated reward. In the harder activities, more problem solving and visual discrimination skills are required. Four activities provide opportunities for creative and experimental play. "Wait Then Press" activities include Basketball Players and Cheerleaders, Noisy Shapes, Big Trucks, Musicians, Mystery Egg and Make It Work. In each case, learners wait for the object to appear and then pressing the switch will result in a related, animated reward. "Wait for



Switch Skills Champion (Inclusive)

Change" activities begin with a picture and learners wait for something on the screen to change – wait for the cat to come out of a garbage pail, a gopher to pop out of a drainpipe, a ball to appear at the bottom of the bowling pin screen, etc. Pressing the switch then results in a reward. In "Locate Change" activities, you wait for something to appear at a random place in the scene, press your switch for reward and then wait again for it to re-appear. Each press adds a part. You can make a monster and a fairy and watch a haunted house. "Experimental Play" activities are different from the others – a picture appears and the learner can press anytime – to burst a balloon, spray paint, water the garden and spray custard all over the screen. In "Ready Steady Go" activities, learners wait for the computer to say "go" before pressing. (i.e. Wait for me to say Go – 3, 2, 1, Go! or Ready, Steady, Go!). Switch Skills 3

has 15 activities in four groups. In "Static Target," the screen shows a large target. A smaller object appears on the left and moves across the screen. The learner presses a switch when the object is over the target – to splat the clowns, to drop sausage in the frying pan, to blast the space invaders, kick the soccer ball, hit the target with a dart or make the dog jump up in the air to catch toys. In "Variable Target" activities, the target position moves to different places on the screen (a star moves to a dancer, the fireworks moves to the pyrotechnician, the net is over the fish, the circle passes over a space invader). "Music" provides error-free experi-

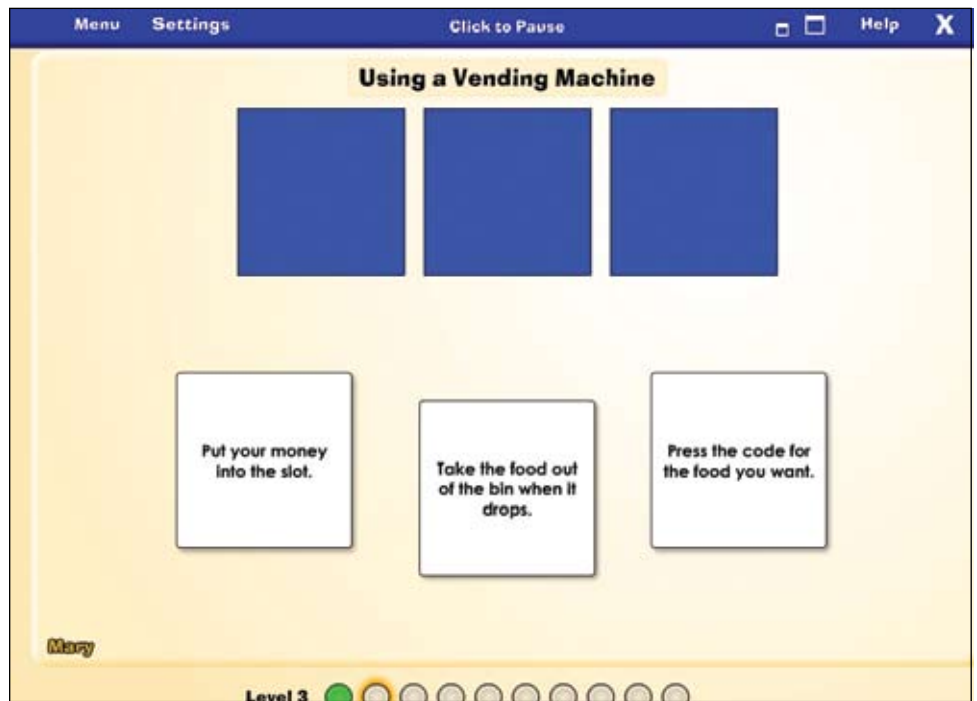
mental play – press anytime to get a reward. "Video Games" activities follow a story-like pattern with a string of six tasks that must be completed. Each task requires one correctly timed switch press. Used together, these programs present an excellent curriculum for switch users to learn timed activation while also enhancing attention, focus and problem solving. Graphics and music are outstanding – extremely well designed programs.

**Switch Skills Champion** (Inclusive: [www.inclusivetlc.com](http://www.inclusivetlc.com)) This new program has five sports for switch users. Players take turns to shoot at baskets, play volleyball, bocce and hockey, and jump hurdles. Each game is designed for two players, each with one switch. Two players can play against each other with different settings controlling their level of difficulty (easy, medium and hard). One player can also compete against the

computer. Also included is a training session activity that provides a simple timed activation sports activity – wait for the athlete to appear and click. This is another great program from Inclusive to help switch users.

**SwitchIt! Maker 2 Older Learners Edition** (Inclusive: [www.inclusivetlc.com](http://www.inclusivetlc.com)) With this program, you can create your own switch accessible stories and slide shows. They are easy to make and easy to play. Each activity can have a series of pictures, video, some writing, music or recorded speech. Once completed, you can use a switch, the spacebar or the mouse button to turn the pages. Some suggestions for older learners are a pictorial journal of a day out, pictures or videos of a project, a story with original paintings and a sequence of photos/symbols to show the daily schedule. Sample activities are included, such as Colors, Dinner, Farm, My Town, Plant a Seed and others.

**Webber HearBuilder Sequencing** (Super Duper Publications: 800-277-8737, [www.superduperinc.com](http://www.superduperinc.com)) Another excellent new software program in the HearBuilder series, this one featuring 120 illustrated sequences for targeting comprehension and critical thinking. Students place the events of an everyday activity in a logical order. They start by ordering simple two-step sequences and gradually progress to six-step sequences. They can choose Sequence Stories or Sequence Instructions and choose to Show Pictures, Play Audio and/or Show Text. Other options include the ability to add background noise at a level you want or allowing the students to hear the stories or instructions before trying to put the events in order. Designed for grades K-6 and available for both Windows and Macintosh, the program has a Carnival theme. In the Sequence Stories activities, there are two- to six-step sequences in narrative format. The sequences include characters, time and transition words, such as first, next and finally and have titles that require students to predict what will happen. The sentences are grammatically complex. This activity is excellent for story prediction, vocabulary, story comprehension, more complex grammar and reading comprehension. In the Sequence Instructions activities, there are two- to six-step sequences in instructional format. The instructions do not have characters and have few time and transition words. Sentences are generally not grammatically complex. Titles are straightforward and the sequences teach basic routines and activities. There are two versions of the program: Home and Professional Editions. The Home Edition features include the ability to choose levels of play for each child (beginner,



HearBuilder Sequencing (Super Duper)

advanced, expert); progress monitoring/data tracking for four children; the option to print progress reports; the option of adding background noise to the expert level to give children practice listening in noise; and settings for turning the audio on or off and listening to the story before trying to sequence the events. The Professional Edition allows you to monitor progress and track data for an unlimited number of students. It lets you individualize each student's program and to set levels of difficulty for each activity. It allows you to add background noise at any level and adjust the volume for each student. You can also customize and print reports. As with the other HearBuilder programs, this program is extremely well designed with great graphics and sound and with creative learning activities that engage the students and help them master the tasks. Watch for the next HearBuilder coming soon – HearBuilder Auditory Memory.

**QuestionQuest** (LaureateLearningSystems: [www.laureatelearning.com](http://www.laureatelearning.com)) There are three levels in these all new research-based programs from Laureate Learning for both Macintosh and Windows. The series is designed to train Who, What, Where, Why, How, With What and Yes/No questions and is appropriate for Pre-K through adults with autism, developmental disabilities, ESL, language-learning disabilities, low vision and hearing impairments. With Laureate's Optimized Intervention technology, the program begins with an assessment and then, as the software is used, it continually



QuestionQuest (Laureate Learning Systems)

monitors responses, adjusts the instructional support and automatically guides the student. There are extensive data collection and built-in reports that document student performance. The programs can also be used in the more traditional manner by selecting "Training by Module/Level." In this level, you can select a module (there are 21 modules) and select the instructional level (beginning, intermediate, advanced). As with all Laureate programs, there are options for direct select (touch screen, mouse/keyboard), or scanning with one or two switches. Extensive report options are available. Question Quest Level 1 introduces the simplest Wh- forms – Who Introduction (i.e. Who is drumming?);



Who/What Subjects (i.e., Who is next to the chair? What is next to the chair?); Who/What Object (i.e., Who is the boy drawing?); Who/What/Where Introduction (i.e., Who is eating an apple? What is the officer eating? Where is the officer eating an apple?); Who/What/Where; Who/What/Where Exhaustive (Who is washing the car? The boy, the girl, the grandma and grandpa); What/With What (What is the girl eating? What is the girl eating with?) Question Quest Level 2 presents more challenging activities, such as discriminating between Wh- and Yes/No questions and also introduces How. It includes: (Who/What/Where pairs; who-verb contrasts exhaustive (Who is eating what and sitting on what?); Who-What/With What/Where Exhaustive (Who is eating what where?); Who Is/Is Not & Yes/No Contrasts (Who is painting? Is the girl painting?); Who/What & Yes/No Contrasts (Who is knocking over the square table? Is mother knocking over the square table?); Who/What Subject/Object Contrasts (Who is pushing the baker? Who is the baker pushing?); How Instrument (How is the cowboy eating noodles? With chopsticks.) Question Quest Level 3 covers the more difficult concepts of How and Why and teaches students to distinguish between How, Why and Where. It includes: How Manner (How is the baker cleaning? On his hands and knees); Why Cause (Why is the father wiping the boy's face? Because it's dirty.); Why Purpose (Why is the cowboy putting up the ladder? To get the cat down.); How/Where (How is the boy doing tricks? Where is the boy doing tricks?); Why/Where (Why is the baby crying? Where is the baby crying?); How/Why (How is the boy filling the washtub? Why is the boy filling the washtub?); How/Why/Where (How is the monkey hanging? Why is the monkey hanging? Where is the monkey hanging?). These three programs can be purchased individually or as a set. Laureate is known for developing high quality and innovative software for special needs and this new set of superior programs answers a great need for software to help both children and adults understand and use WH and other questions.

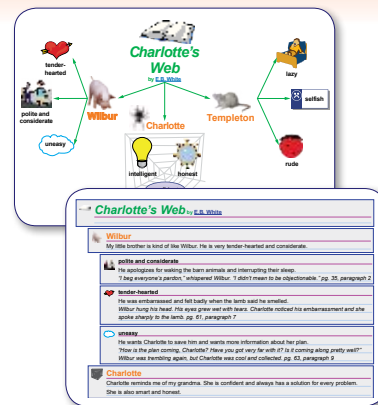
**I Hate Peas** (Marblesoft/Simtech: www.marblesoft.com) Another cute story from Bill Lynn, Sim-Tech and Marblesoft, designed to stimulate a pre-reader's interest in early literacy. The Sing-A-Long version lets the user watch and listen to the story and the Explore-A-Story version lets the user experiment with text and graphics and to page through the story at their own pace. Users can use a switch, mouse button, touch screen or space bar. Switch modes include Momentary-Direct (as long as the switch is

held down, the animation plays); Latching (one switch press starts the animation and the next switch press will stop it); Line-by-Line (the next line of the story will play each time a switch is hit); Timed (each time the switch is pressed, the story plays for the specified number of seconds); and Use Switch Prompts (if the user has not pressed the switch after the designated number of seconds, a verbal/visual prompt will be spoken and displayed). Text can be displayed as English text or as Mayer Johnson Picture Communication Symbols. There is also a resource folder on the CD that contains a full color storybook with text in PDF format, a I HATE Peas PCS Storybook, a coloring book and a musical score. Lots of fun for young children.

**Click to Read: Animal Habitats** (Marblesoft: www.marblesoft.com) This is the second in the Click to Read Series. The first one, Click to Read Life Skills, was reviewed in DISKoveries, in October, 2010. This new program, Animal Habitats, follows the same format. There are four stories for early readers, using SymbolStix picture communication symbols (color coded by parts of speech). Designed for ages 3-7, this is an excellent program for vocabulary and language development and the development of early literacy. For both Macintosh and Windows, each of the four stories has a reading mode, where the reader listens to the story, sentence by sentence, and becomes familiar with the vocabulary and symbols. Clicking anywhere advances to the next page. The story can then be read in an interactive mode. In this mode, the learner again sees the text, picture of the animal, and the three symbols for the text. They can then click any symbol to hear its meaning read aloud. When they are finished exploring, they can then click the arrow to advance to the next page. In the Tell The Story mode, there are three levels and children tell the story by arranging the symbols. The first level is errorless – two of the symbols are in place and the third (only symbol below the line) just gets selected to complete the sentence. In the second level, two of the symbols are already in place but there are now three symbols below the line and only one is correct. In the third level, children must arrange the three symbols in correct order to re-create the sentence.

There is a Show What You Know activity for each story, where the players can demonstrate their understanding of the core vocabulary in a practice mode or

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by playing Bingo or Concentration with the picture symbols. The stories included are A Home in The Forest, Ocean Creatures, Pond Life and The Desert. Each story builds vocabulary through simple text and picture support and encourages literacy while providing student independence and success. The program works with mouse, touch screen or switches and has many options to change voice (male/female, background, etc.). Along with each program is a "print book," which allows you to print a copy of the story for each student, that may be used during guided reading, for independent practice or for home

reading. The core vocabulary is also provided on small cards that you may print, laminate and cut apart. Both of these programs are excellent for literacy and language for all young learners. Watch for more programs coming soon.

**Boardmaker Studio** (Dynavox/Mayer-Johnston: [www.mayer-johnson.com](http://www.mayer-johnson.com)) Every new version of Boardmaker brings an easier interface, new functions and a greater range of options and applications. This new version brings us greater ease of use, while increasing content, templates, new "gadgets" and much more. There are helpful tutorials and an


online community for sharing resources and technical support. Boardmaker Studio has hundreds of time-savers, like Studio Starter Templates (that can be opened, modified and individualized for particular classes and/or students), and "Gadgets" (pre-programmed buttons or objects that can be added to your templates to make programming easier and faster). The new Connect interface is a user-friendly interface that lets you quickly access the most common tasks from Boardmaker Studio and the content from the BoardmakerShare.com Web site, which has shared activities as well as your online projects. The Designer is the primary workspace in Boardmaker Studio. You use it to create, edit, preview and play your projects. One of the new features is "SmartSyms," which are symbol/label pairs that behave as a single object. You can place them directly on a page, on an object on a page or use them as a page background. "Gadgets" are pre-programmed objects and groups of objects you can use to construct or enhance onscreen activities. They are organized into categories and subcategories so you can quickly locate them. Some of the gadgets include Basic (add buttons that are pre-programmed with common actions); Draggable Buttons (create activities using virtual manipulative, such as grouping, matching and sorting activities); Fun Interactions (create activities with animations, multimedia, and other effects); Mathematics (calculators, spinners, counting bins and more); Navigation (navigate to other pages, programs, files and Web sites); Question and Answer (multiple choice questions); Time and Writing (dictionary, grid, check spelling). You can create your own gadgets using an object or group of objects on a page. You can import boards, board packages, and .zip files that were created in Boardmaker version 5 and above and save them as new projects to edit in Boardmaker Studio. There is also now a Symbolate Button (as the user types each word into a symbolate button, the symbol for the word automatically appears) and a Word Predictor Button (as the user types into the message window, Boardmaker anticipate the user's word choices). The "edit in place" feature lets you quickly place text and symbol into a standard or freeform button. Adding a video to a page can make your activities even more motivating for students. Boardmaker Studio includes helpful video tutorials and an online community for sharing resources and technical assistance. For more than 26 years, Mayer Johnson has been bringing us PCS (Picture Communication Symbols) and quality products for special education and speech-language pathology. More recent Boardmaker versions, and now Boardmaker

**The raccoon lives in the forest.**




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lives




forest




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fox



raccoon

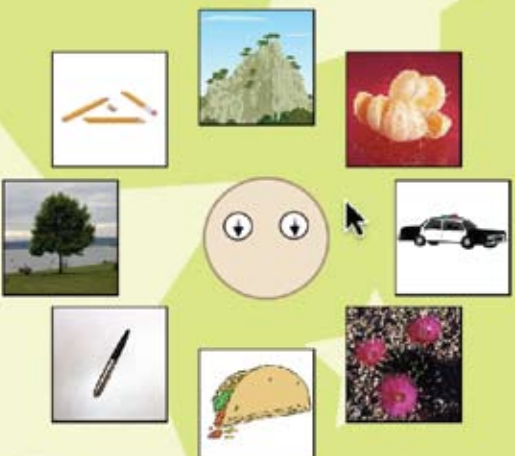


deer



Click to Read: Animal Habitats (Marblesoft)

Previewing Lesson: Bye Gaze 4



TeachTown Basics 2.0 (TeachTown)

Studio, reach even beyond this, with applications for children with autism, for teachers of English Language Learners and many more – a product with nearly endless applications and far-reaching support and share options. You can download and use Boardmaker Studio for a free 30-day trial use – just download and try before you buy.

**TeachTown Basics 2.0** ([www.teach-town.com](http://www.teach-town.com)) This curriculum was designed for children, developmental age 2-7 years, with autism and other special needs. It is a research-based, computer aided instructional program with off-computer activities as well and uses Applied Behavior Analysis (ABA) teaching methods, such as Discrete Trial Training and Pivotal Response Training. The Web-based software covers Pre-K through first grade curricula in six learning domains – Adaptive Skills, Cognitive Skills, Language Arts, Language Development, Mathematics and Social and Emotional Skills. Each domain has five different levels, including Early learner: introductory skills; Beginning learner: foundation skills; Intermediate learner: skill building objectives; Active learner: school readiness skills; and Advanced learner: independence building skills. Lessons in Adaptive Skills focus on student self-awareness, self-care, self-help skills and fundamental daily living skills. Lesson subjects include learning about body parts, food types, clothing items, time, money, safety and the community. Cognitive Skills focus on deductive reasoning, critical thinking and logical reasoning skills. Lessons include following multiple step directions, organizing items into categories and shapes, comparisons, matching, sequencing and associations. Language Arts teaches early reading skills (phonics, upper and lower case letter, sight words, language comprehension, spelling and basic narrative structure.) Language Development teaches communication skills (vocabulary, word recognition, listening skills, parts of speech, how to answer questions.) Mathematics (basics of number awareness, counting, matching quantities, number patterns, addition, subtraction, fractions, comparisons of more/less.) Social Emotion teaches basic social knowledge (how to identify emotions, recognizing the causes of emotions in others, attending to social information, following eye gaze.) Learning tasks contain activities, such as “Pick the pictures that are the same,” “Where is the one that is different,” “Find the picture that matches the word,” “Which way is the arrow pointing,” etc. Pictures are clear and presented against a simple background. After each answer, whether your student has chosen correctly or not, the correct answer is shown. Reward sequences appear periodically (about every

four correct answers) and can be interactive or short cartoon sequences. You can select the rewards that you feel are appropriate for individual children. The program begins with a short assessment and the computer begins training based on that. However, teachers or parents can customize all domains, presenting lessons that match curriculum goals or individual IEP goals. All lessons can be previewed to ensure they are appropriate. Each level is also accompanied by recommended off-computer activities, which are presented in a comprehensive loose leaf binder that is included with the program and also available as PDF files. As a subscription-based software program, children’s files are available on different computers. If a school purchases a subscription for a student, the program can be used at home, as well as in school. All work done at home (internet access required) is then synced with the school program. There are extensive record keeping and report writing options. Notes in reference to both on- and off-computer activities can be added and responded to by other staff. This is a highly motivating and well-designed learning program that offers computer activities, off-computer learning, data collection and the ability to be used in

multiple settings and locations. Visit the Web site for additional information and details.

**ScreenPrint Platinum** (SoftwareLabs: [www.softwarelabs.com](http://www.softwarelabs.com)) With one keystroke, you can capture, print or e-mail anything you see on your Windows screen. Works with Windows 7, as well as earlier versions. You can capture full screens, active windows, menus or user-defined areas (even the entire contents of scrolling Web pages). After installation, all you do is press your Print Screen key. You can then work without interruption and review your screen shots at your convenience in the high resolution thumbnail view. Other features include zoom capture (two to eight times magnification), built-in PDF convertor, 27 special effects that can be added to your images, printing of captions – date and time stamps, auto-capture timer and auto recover if your computer crashes. You can also capture and save images to seven different graphic formats. This is a great program to use if you are looking for pictures to use in programs like SwitchIt Maker (reviewed above) and others, like SwitchIt! Jigsaw Maker, or if you are doing a workshop/meeting and want to print a handout that has screen shots from programs and other computer projects.

**New from Laureate! QuestionQuest™**



**NEW**

QuestionQuest is a new three-level series that helps students with language disorders understand, answer, and ask many common forms of questions (*Who, What, Where, Why, With What, How and Yes/No*). These programs train both the syntactic and semantic aspects of different types of questions.

**To learn more and receive Laureate's FREE Demo CD, call 1-800-562-6801 or visit [www.LaureateLearning.com](http://www.LaureateLearning.com).**



Sample questions from Level 3:  
 “How is the boy leaving the tent?”  
 “Why is the boy leaving the tent?”

**Laureate™**

*“QuestionQuest is really cool! From an SLP perspective, I think the approach is right on.”*

**Lisa Grant, M.S., CCC-SLP**



**Listen and Respond:** Watch for this new program for older learners from Judy Lynn, to be reviewed in a future DISKoveries.

## WHAT'S NEW IN SPEECH RECOGNITION AND WORD PREDICTION

**Say-N-Play** (Advance Games: [www.saynplay.com](http://www.saynplay.com)) Developed by Holly Strange, a speech-language pathologist, Say-N-Play is a Windows speech articulation practice program for ages 4-9 that uses speech recognition technology (headset/microphone are included). Great for both home and therapy, it includes fun and motivating articulation drills within game formats – perfect for practicing and improving carry-over. There are two modes: Lesson mode lets the children experience their target sounds in appropriate positions and Fun mode allows them to play the games with words that are randomly selected by the computer and consist of sounds in all positions of words and in phrases. In Lesson mode, the phonemes are listed on a selection screen (23 phonemes and blends) and the computer generates appropriate words based on the chosen phonemes. Levels of progression are target sounds in vowel combinations, target sounds in initial position, target sounds in the final position of words, target sounds in the medial position of words and target sounds in phrases. Some of the board-type games include Racing, Skating, Volley-

ball, Soccer, Treasure Hunt, Adventure and others. A picture stimulus is presented with the written format of the word included. If the target phoneme is produced incorrectly, a verbal prompt for the word will be provided two times. If the response is incorrect on the third attempt, the trial will be counted as incorrect. When a child receives 90 percent accuracy on a phoneme at a particular level of progression three times in a row, the computer will automatically move to the next level of phoneme progression. If a child only receives 20 percent accuracy on a level twice in a row, the computer will automatically move the child back down to the previous progression level. There are two versions of the program – Home Version stores up to three player profiles and Professional Version stores up to 15 player profiles and also provides player progress charts in Lesson Mode. This is a great new concept and excellent way for practicing articulation in a fun way. It's a great alternative to flash cards. If you want to see a demo, go to [www.saynplay.com](http://www.saynplay.com).

**WordQ + SpeakQ** ([www.goQsoftware.com](http://www.goQsoftware.com)) Designed for struggling writers, this combination program, for Windows only, is the first and only writing tool that integrates word prediction, speech recognition and spoken feedback. That means it can be used as a basic talking word processor (with programs such as Word). Voice output will

be present for letters, words and sentences as they are typed. In addition, highlight any document (Web sites, e-mails, instant messages), click the read icon and the document will be read aloud. You can change the voice and the speed that the words are read. Many other options can be selected/deselected according to individual needs. It's great for reading back what has been written, letting the learner hear any mistakes so they can be corrected. In addition, WordQ is a word prediction program – type a letter or two and WordQ will make suggestions for possible words that are being typed. When the correct word appears, just press the number or click the word and the word appears in the text. WordQ learns which words the writer uses and predicts them faster. It predicts words even if they are spelled creatively or missing parts. It offers spoken feedback if needed (if the user has difficulty reading the suggested words). SpeakQ, now fully integrated into the program, lets the writer type the words they know and speak the ones they don't. Speech recognition can be used to write everything from single words to entire paragraphs or used only when when needed to help with spelling or word selection. It can be trained to understand the speaker's voice, with no reading required. It allows you to mix typing and speaking for best results. You can try WordQ+SpeakQ free for 30 days by going to the Web site and downloading it. All the writing and dictating features of the full program are available, so you can see how WordQ+SpeakQ work separately and together to improve writing skills. Any progress you make with your user profile, settings or features are saved separately from the trial, so even if you uninstall it and purchase the full program at a later date, your files will be available. WordQ is also available as a stand-alone program if speech recognition is not appropriate or desired. Visit the Web site to also view videos and tutorials on the use of these two very valuable programs for individuals with writing and spelling difficulties.

**Nuance Speak & See** (Nuance:[www.nuance.com](http://www.nuance.com)) This new Windows program from Nuance includes Dragon Naturally Speaking 10 and works together with it, adding some very valuable additional features. A headset with microphone is also included with the programs. The Nuance Speak & See suite combines speech recognition, a screen reader and magnifier, a reading and writing toolbar and a language learning assistant. Dragon Naturally Speaking allows the user to dictate through the microphone directly into Word, e-mail or other applications. Users can launch applications, manage files, change font size and work on the Web,



Say-N-Play (Advance Games)

all by voice. It eliminates the manual task of typing. Dragon is trained by reading selections into the computer so it becomes familiar with your voice. Speak & See's Reading and Writing Support Toolbar allows any on-screen text to be spoken aloud, using ScanSoft's Realspeak voices. It can be set to read characters, words and sentences as they are typed, becoming a talking word processor. It can highlight each word, sentence or paragraph as it is spoken. You can also change the color of the highlighted text and the background. It also includes a homophone dictionary, a thesaurus, a reference dictionary and a spellchecker. It can be locked onto any Windows software application. There is a screen magnifier (Lightning Express) that lets you magnify all or part of the computer screen up to six times for easier viewing. Reading Ruler is a horizontal highlighting and magnifying band that makes it easier to see and concentrate on text or objects on the computer screen. Viewing is further enhanced as the screen above and below the strip is dimmed. You can also change the color and tint of the computer screen. If you go on the Nuance Web site, you will see a video that will show you the Speak & See toolbar and some of its functions.

**Dragon Dictate Speech Recognition for Mac OS X** (Nuance: [www.nuance.com](http://www.nuance.com)) The developers of Dragon Naturally Speaking for the PC have now created Dragon Dictate for Macintosh. With it, users can input text by speaking and interact with other Mac applications, using only their voice, with amazing accuracy and just minutes of training to get started. Dragon Dictate offers Recognition Training, which enables it to learn how you speak while you use the software. Easy commands include things like "Reply to this message," "Open Microsoft Word" and "Search Google." You can also create voice commands that automate complex actions. It works with iChat, Pages, Safari and more. A powerful Vocabulary Editor lets you add specialized words, such as the names of people, places and other proper nouns. Instead of using your mouse to select menu commands or your keyboard to type shortcuts, simply speak a command and Dragon Dictate executes it for you. Control Mac applications, press any keyboard key combination or move your mouse cursor and click anywhere on screen by just using your voice. Dragon Dictate can read selected text out loud, enabling you to proofread your dictated documents using Mac OS X's powerful text-to-speech capabilities. Dragon Dictate comes with a high-quality USB headset microphone (included with new purchase), so you have everything you need to get started. Or, you can use

Dragon Dictate with a Nuance-approved Bluetooth USB microphone to go hands-free and wireless. For those times when you need a little assistance, Dragon Dictate offers complete, searchable online help. It's always available, convenient to use, and easy to understand so you can get the answers you need without delay. Placement of the cursor can be done with the MouseGrid commands. Using numbered 3x3 grid sections onscreen, you can narrow down the placement of the mouse pointer, and then use a Mouse Click command, such as "Open MouseGrid" and use one through nine to narrow placement. For mouse click, double click or click and drag and mouse movements, you just use commands and directions (i.e. move mouse left). Dragon Dictate requires an Intel-based Mac, with Mac OS X 10.6 Snow Leopard and a USB microphone for Mac (included).

### MONEY MANAGEMENT SKILLS FOR OLDER STUDENTS

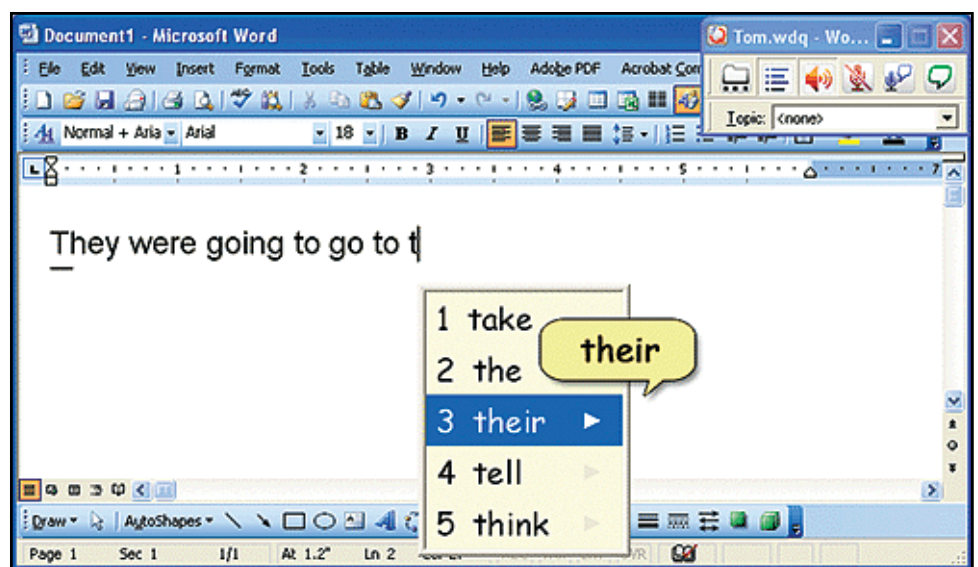
Many special education teachers and Transitions programs are requesting software and other assistance in teaching money management skills for their students. Following are some resources that can be helpful:

**Quicken Essentials for Mac and Quicken Deluxe 2011 for Windows** (Intuit/quicken:[www.quicken.com](http://www.quicken.com)) These two programs can be used to help teach students how to manage their money. They can be used to help students learn to use a check register and to understand terminology, including payee, deposit, balance, withdrawal, transfer, etc. Students can learn to use the register for tracking their debit payments and understanding their resulting balances. By setting up separate accounts, you can

track and teach the difference between long term and short term saving, as well as creating paper investments, so that they can be watched to track growth or loss ( a good way to introduce and help young adults understand the meaning of the stock market). Both of these programs offer comprehensive information on all areas of money management, investments, savings, etc. Some of the key features and benefits include the ability to put all accounts in one place, to categorize expenses to see where the money is going, to create and stay on a budget, to pay bills and more. The Web site has valuable information that can be applied as the program is used. Also visit [www.mint.com](http://www.mint.com) for some factual advice and guidance on things, like how to choose a credit card, understanding stocks. Etc.

**www.moneyinstructor.com** is another good Web site to teach money skills from preschool through high school. Visit it and find money worksheets, money lessons, money lesson plans and interactive money exercises. This site allows you to print blank checks, do an interactive check writing lesson, print check register and check book pages and do an interactive check register lesson. There are other worksheets on writing dollars and cents, check writing, paying bills, endorsing a check, filling out deposit slips, entering transactions into a check register and reconciliation. There are also activities and games related to money skills.

**Attainment programs** ([www.attainment-company.com](http://www.attainment-company.com)) Attainment has some excellent software programs that teach money skills to students who are having trouble learning to recognize and recall coins and money values, learning to count out money,



WordQ + SpeakQ (GoQSoftware)

give change, pay with the correct amount, etc. See their programs, previously reviewed in DISKoveries, including Basic Coins, First Money, Spending Money, Making Change and others.

**Money Skills** (Marblesoft: [www.marblesoft.com](http://www.marblesoft.com)) Here's another excellent program to help teach money values and money skills. It teaches American, Canadian, European, British or Australian currency with clear, realistic pictures of the money. In the Counting Money activity, each coin or bill is introduced and students learn to count that denomination. Early levels include a number key to help the student count. Other activities include Making Change, Counting Change and the Marblesoft Store (save money and then go shopping to purchase items on display).

**Intuit QuickBooks Premier Editions 2011** ([www.intuit.com](http://www.intuit.com)) No feature on money management would be complete without mention of the classic software for small business management. For those professionals who run small agencies or have private practices in speech, physical or occupational therapy, QuickBooks is the program to use. QuickBooks creates custom forms for invoices, tracks all of your employees, reminds you of overdue invoices, tracks your company financials, runs extensive reports to analyze your data, and manages projects. Banks have added QuickBooks integration to their online banking features, allowing automatic electronic updates and account reconciliation. From payroll to expenses to taxes, QuickBooks takes all of the data from these transactions and makes it accessible in a variety of reports, charts and graphs. Users can filter data by a number of different criteria and create custom reports that can be used for managing the business. If you are a non-profit, you can also use QuickBooks to track donations and expenses applied to grants and overhead.

## DVDS FOR LEARNING

**Riding, Hiding, Food and Fun!** (Watch Me Learn: [www.watchmelearn.com](http://www.watchmelearn.com)) Another wonderful DVD from Watch Me Learn, one of the leaders in video modeling for children. In this new DVD, there are 27 different scene selections, which can be played as one video or by episodes. The 27 selections include bike riding, why questions, musical instruments, food (including hand washing, restaurants), having fun (water balloons, puzzles, treasure hunt), environmental sounds, associations (go-togethers) and vocabulary (nouns, foods, instruments, verbs). Other important language skills are included, such as language and motor skills, academic skills, self-help skills and social skills in a natural



uDraw Game Tablet (THQ)

setting. Other areas include counting, prepositions, food groups, money, more/less, safety, manners and much more. The concept is play with curriculum embedding into the play activities, making it easier to learn. You can also visit the Resource Section and download the environmental sounds used in the video, along with some fun worksheets. The Watch Me Learn videos are effective tools for children with autism, speech and language delays and developmental disorders.

**Shalom Sesame Series** (Sisu Home Entertainment: [www.sisuent.com](http://www.sisuent.com)) Children love Sesame Street and the Sesame Street characters, and they will enjoy this group of DVDs, part of a series featuring American and Israeli celebrities. The DVDs are designed to help bring Jewish culture and tradition and Israeli life to American children. Each focuses on storylines drawn from Jewish cultural traditions, with some Hebrew letters and words and unique sites in Israel. *Shabbat Shalom*, *Grover: Grover can't seem to figure out why everyone is so busy just before a day of rest*. This DVD is all about Shabbat, including favorite Shabbat songs. *Grover Plants a Tree*: It's a holiday and Grover and friends get back to nature as they learn how to plant trees and make the world a better place. *Mitzvah on the Street*: When a storm makes a mess of the neighborhood, everyone lends a helping hand. Grover is also invited to a Bar Mitzvah in Jerusalem.

**Spanish for Kids: Las Estaciones** (The Seasons): (Whistlefritz: [www.whistlefritz.com](http://www.whistlefritz.com)) This Spanish immersion DVD (learning by hearing and speaking Spanish without any English translation) features an animated mouse who interacts with live-action adults and children to help teach Spanish. In this DVD, one in a series, young children, ages 2-6, learn about the four seasons, including

sledding and snowball fights, trick or treating, splashing in puddles and swimming. It's a sing-along, dance-along introduction to Spanish language learning. It also includes a Parent/Teacher Translation Guide that lists all words in order of appearance and provides an easy reference for parents who are first-time learners of Spanish.

**Fun on the Farm** (TM Books & Video: [www.tmbv.com](http://www.tmbv.com)) This DVD takes children on a trip to a farm where they learn about farmers, their crops, animals and how we get our food. It shows planting, cultivating and harvesting crops and shows big farm machinery, as well as including trips to the "Farm in the Zoo," and the John Deere Harvester Works. There are nine original songs by James Coffey. Good fun for ages 3-5.

**Barney: Best Fairy Tales** (Lyonsgate & HIT Entertainment: [www.barney.com](http://www.barney.com)) In this fun DVD, Barney and friends share their favorite fairy tales set to music and dance. They include Jack and the Beanstalk, Three Bears, Billy Goats Gruff, Shoemaker and Elves, The Sharing Hen, Tortoise and the Hare and others. Classic stories make even better and more fun for preschoolers.

## INTERACTIVE ENTERTAINMENT SYSTEMS FOR LEARNING

**Wheel of Fortune for Wii** (THQ: [www.thq.com](http://www.thq.com)) Now you can be a contestant on Wheel of Fortune and join Pat Sajak and Vanna White as your favorite Mii character. You can play against virtual opponents or play with a group of friends or family (up to three players). The Wii remote can be used to spin the wheel and select your letters – or use Wii Speak (sold separately) to call out your letters – just like the show. There are over 8,000 Hangman style puzzles and "commercial break" mini-games and trivia. Wheel of Fortune is always a

great way to enhance language, literacy and spelling skills while having great family fun.

**Are You Smarter Than A 5th Grader? Back To School for Wii** (THQ: [www.thq.com](http://www.thq.com)) This is a new version of the game. Test your knowledge with 6,000 challenging questions in 23 categories, including history, geography, science and more, with options to Peek, Cheat or Save. There are even new extra credit questions and a new Pop Quiz mode – a lightning fast mini-game. Other activities include Super Battle of Wits, Study Buddies (strategize with a teammate) and Classroom Clash (challenge up to three friends).

**Big Beach Sports 2 for Wii** (THQ: [www.thq.com](http://www.thq.com)) Eight new sports to play – Canoe, Cricket, Disc Golf, Dune Buggy, Water Rocket, Rugby, Soccer and Surfing. Players can play alone or with up to four friends across multiple courses.

**New Carnival Games for Wii** (2K Play: [www.2kgames.com](http://www.2kgames.com)) has 30 all new games and carnival attractions for one to four players. Challenge your family and friends to head-to-head competitions or team up for cooperative play. There's Fish Bowl Bounce, Pitch-A-Plate, Skee Ball, Swish It (Basketball) and Bottle Stand-Up. Enter the Haunted House and ride around in Bumper Cars. Some of the other games include archery, fortune teller, horseshoe toss, beach bingo, balloon blast, tic-tac-toe, photo booth and much more. Good fun and lots of laughs!

**Birthday Party Bash for Wii** (2K Play: [www.2kgames.com](http://www.2kgames.com)) Children can invite their friends and family using the enclosed invitation. Then they choose a party theme room and play all new versions of their favorite Birthday Party Bash Games. There are 10 theme rooms for boys and girls (sports, glamour, music, pirate, stuffed animals, monsters, princess and more). There are over 20 classic birthday party games, including Pin the Tail, Hot Potato, Present Frenzy, Pinata Blast, Slingshot Splash, Balloon Popper, Musical Chairs, Sack Race and many more.

**Dora's Big Birthday Adventure for Wii** (2KPlay: [www.2kgames.com](http://www.2kgames.com)) This Wii game is a birthday party for Dora ... but first players go on a magical journey as they help Dora find her way home by jumping, climbing, swinging and sliding through various levels. Along the way, they can collect colorful crystals but need to watch out for the sneezing tree holes, squirting honey hives, slippery bananas and more. Parents or older siblings can join by using the Helper Feature with a second controller. There are also on-screen prompts showing how to use the Wii Remote in each situation. The first time a new motion is needed for the Wii Remote, it is introduced with a brief tutorial. At various points in the

game, Dora's path is blocked by an obstacle. Players must complete a simple puzzle for her to be able to go on. There are also backpack, racing mini-games, birthday games and more. In Dora Saves the Crystal Kingdom, Dora, Boots and the Snow Princess collect color crystals and save the kingdom. There are lots of swinging and waving movements with the Wii remote to make things happen. This game also has the Helper Feature and on-screen prompts for using the Wii Remote.

**Nickolodeon FIT for Wii** (2KPlay: [www.2kgames.com](http://www.2kgames.com)) In this Wii game, you can play with Nick friends (Backyardigans, Diego, Dora, Ni Hao, Kai-lan) and choose fitness categories (i.e., upper body strength, lower body strength, core strength, balance, upper body coordination, lower body coordination, heart healthy). The games include Skip Rope, Bowling, Shape Bounce, Skateboarding, Rafting, Pogo Stick, Biking, Racing, Football and more. Each game is identified as belonging to one of three different intensities (light, moderate, vigorous).

**uDraw Game Tablet for Wii** (THQ: [www.thq.com](http://www.thq.com)) If you have a Wii and like to draw, you are going to love this wireless game tablet with a 6-by-4-inch drawing area. The Wii remote snaps into place on the tablet and

powers it, while also taking advantage of the motion sensing capabilities. Draw, paint, color, print and share your creations with friends and family. As you draw on the tablet with the pressure-sensitive stylus, your creations will appear on the TV. There are multiple training tutorials and a library of more than 100 stamps and 15 post-processing effects. uDraw Studio is included with the tablet – draw with pen, watercolor and other media, change colors, brushes or canvases. You can also use the Coloring Book with a variety of pictures to color and share. With Replay, you can see how your work of art was created, stroke by stroke, for a helpful learning experience. You can also review your creations in the on-screen gallery. Save your creations to an SD card for easy sharing. Other programs that work with the uDraw Game Tablet are: Pictionary – play this classic game – guess words from sketches made by other players of your team. The words can be objects, people, actions, places, animals or more. There are three game modes (Pictionary, Pictionary Mania and Free Draw). Dood's Big Adventure – use the uDraw GameTablet to draw, tilt, turn and maneuver through 60 challenging levels in four game modes (Pen Panic, Roly Poly, Bubble Trouble and Fan Frenzy). Customize your own Dood,

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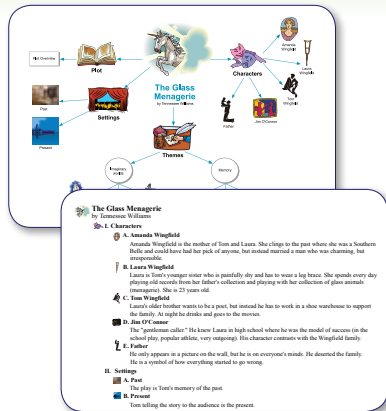
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solve drawing-related challenges, collect coins and defeat enemies. More titles are planned to be introduced for the uDraw Game Tablet throughout 2011.

**Body and Brain Connection for Xbox** (Namco: [www.namcobandaigames.com](http://www.namcobandaigames.com)) In this new Xbox 360 program with Kinect, players are challenged to exercise both their mind and their body with mini-games in math, logic and memory, along with a wide range of exercises, based on the theories that brain activity is augmented by physical movement. With no controllers necessary, and an E-for-Everyone rating, it's perfect for the whole family, regardless of age or skill level. Exercises can be customized for individuals, as well as groups, and results are tracked. Menu selections are made with your hands – hold them up and a pair of hand cursors appear – move them to make your selections. The task is to work a problem out in your head and then complete the answer with some specific physical action. Instead of simply answering an algebra problem, you have to answer the problem by kicking a soccer ball with the appropriate number on it toward a goal within a specific time limit. In another, you swat at balloons in the proper numerical or color-coded order. In another, you form your arms into the shape of the clock hands to copy the clock on screen. The program responds accurately to the movements and the activities are challenging without being frustrating. In the future, downloadable content will be available with additional exercises and challenges.

**LEGO Harry Potter: Years 1-4 for Xbox** (LEGO: [www.lego.com](http://www.lego.com)) With this new program, players can experience their favorite Harry Potter moments together with their favorite LEGO game-play. They will explore Hogwarts Castle, Diagon Alley, the Forbidden Forest and much more as they play as Harry Potter, Ron Wesley, Hermione Granger, as well as other favorite characters. They will attend lessons, cast spells, mix potions, fly on broomsticks and complete tasks to earn points. Play options include single player story mode, free-play and two-player co-op online and offline. Great graphics, clever use of the spells and the humor and problem-solving activities make this a great fun program for Harry Potter and Lego fans. It expertly captures the heart and essence of the books and the films.

**EA Sports Activ2 Personal Trainer PS3 with Heart Rate Monitor** (EA Sports: [www.ea.com](http://www.ea.com)) This game features

a wireless control system powered by motion sensors in leg and arm straps. Additionally, it contains a heart rate monitor that provides constant on-screen monitoring, allowing users to capture intensity and optimize performance over time. It makes working out simple, fun and effective. There are 70 exercises and activities and a nine-week program that provide total body conditioning using progressive exercise and a three-week cardio program. Each has three difficulty levels. You can also create customized workouts with exercises, like squats, lunges and bicep curls and fun fitness activities, such as mountain boarding, basketball and boxing.

**MOTIONSPO RTS...Play For Real for Xbox & Kinect** (Ubisoft: [www.ubisoft.com](http://www.ubisoft.com)) This program lets you use your Xbox and Kinect to play six sports. You can ski, box, horseback ride, play soccer, football and go hang gliding, all with no controllers and with your body only. Most of the challenges have multiplayer mode, which includes split-screen options for some events and four-player options for others. MOTIONSPO RTS commentators follow your hits and misses as you compete to go from local hero to global sports phenomenon. Good fun.

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# Tic Tac Toe:

A complicated game of connecting the dots

By Jennifer Courduff and Donna Mawhorter

**T**ic tac toe ... remember that game? Simple enough. You have to get three Xs or Os in a row to win. You have to make connections between one square and two other squares on a grid.

Professional development and teacher training is often approached using this grid-like mentality. Teachers come in, they learn how to use technology tools, and they are sent on their way to implement these tools within their instructional practice. Using the grid analogy, teachers learn how to use technology tools in a training setting outside their normal work environment. Implementation is discussed as

a separate box on the grid. Management and implementation of technology tools within instruction are rarely discussed and almost never modeled.



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There is an emerging body of current research on professional development for technology integration in special education environments (Lu & Overbaugh, 2009; Puckett, Judge, & Brozo, 2009). The good news is that teachers are becoming comfortable using technology resources for professional tasks, such as studying student assessment data and developing electronic Individualized Education Programs (IEPs). Basic technology knowledge is not such a huge barrier to technology integration anymore. Now, there is a more complex gap to bridge – helping teachers of exceptional students use technology tools naturally in daily student learning activities.

Through hours of research, working with teachers, and passionate discussion on what is working and what is not working, we have discovered the following: Technology Integration means making Connections (TIC) across the barriers of Time, Accountability and Culture (TAC) with the end goal of Teaching within an Optimal instructional Environment (TOE). In a good game of tic tac toe, strategies are put into place to make sure you win. Like a good game of tic tac toe, teachers need strategies to help them make the connections between the technology tools they already have in the classrooms and appropriate, easy ways to integrate these tools into student learning activities.

The following real-life experiences show the difference:

#### **SCENARIO 1:**

During a recent assistive technology assessment, a special day class (SDC) teacher stated that the students did not need any assistive technology to be successful in her class. When a certain student was assessed, he was able to write somewhat legibly and could formulate sentences utilizing pencil and paper. However, when he was given a portable word processing device, he pepped up. He sat up straight and attempted to utilize typing skills. Even though he only used two fingers, he was more excited about writing. His writing was quick and his sentence structure was fluid. When he was shown the word prediction and text-to-speech features of the device, he became even more excited. It was as if he was ready to write a book. Even though the SDC teacher

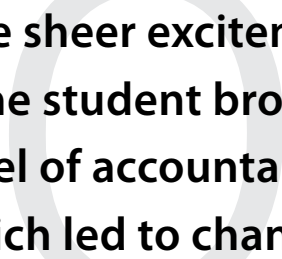


**“What barriers are stopping her from making the connections?”**

had a portable word processing device in her classroom and knew how to use it, she had not connected the dots between having an existing technology tool and using the tool with a student who really didn't like to write.

#### **SCENARIO 2:**

A student in a general education third grade classroom, who has cerebral palsy, had difficulty with her writing skills. Her printing was slow and somewhat illegible. She had difficulty copying from a paper beside her, as well as from the board. Her teacher modified her assignments but was still concerned about her writing skills. During an AT assessment, the student was given a portable word processing device to help her write more clearly and descriptively. At first, her typing was slower than her writing. But she was extremely excited about the features it had, such as word prediction, text-to-speech, a dictionary, a thesaurus and much more. She carried the device back and forth to school, using it for homework, as well as class work. Her grandmother shared that she has been excited about writing and she is doing better in school. The sheer excitement of the student brought a level of accountability that led to change in this scenario – the teacher and her student connected the dots from knowing that a technology tool exists to using the tool powerfully – creating the optimal learning environment for the student.



**“The sheer excitement of the student brought a level of accountability, which led to change.”**

#### **SCENARIO 3:**

Two resource specialist program (RSP) teachers were given iPod touches loaded with many educational apps to use with their students. The students were excited about using these devices to enrich their learning. Although the enthusiasm was there, use remains very limited. Why? There is a cultural barrier that exists between general and special education teachers regarding instructional demands and content delivery approaches. The general education teachers want the students to receive support on the paper class work they assign, leaving the students

with little or no time to use the apps on the iPod touch to help with skill-building based on IEP goals. The RSP teachers lack the time to use the technology because of a cultural expectation to complete the work assigned in the general education classroom. Again, because the cultural barrier is strong, teachers are not able to connect the dots from having the technology tools to using these tools to create an optimal learning environment for students.

#### SCENARIO 4:

An elementary RSP teacher attended E-Portfolio training through the district. She popped with enthusiasm at the thought of implementing E-Portfolios with her students. She chose to begin with a fifth grade student who read at a pre-primer reading level. On the goal slide of the E-Portfolio, the student expressed a personal goal to read the book, "Harry Potter" (approximately a 5th grade reading level). Each month, we visited the teacher and student to trouble-shoot, provide ideas and suggest new technology features to integrate into the E-Portfolio. The teacher and student used Microsoft Access to create a daily student activity log. They used the voice recording feature in MS Word to add reflective narration on the student's reading progress. They learned how to insert hyperlinks to files within the E-Portfolio – bringing the project to an interactive level. When the E-Portfolio was complete, they used PhotoStory3 to create a multimedia summary of the student's journey. At one point, the teacher confessed, "To be honest, I love all of this technology and the idea of an E-Portfolio, but I don't think I could have followed it through if I didn't know you were coming to check on me every week." The student's reading level raised from pre-primer to second grade, seventh month during the three months it took to complete the project. Through consistent access to support and a willingness to try new technology tools, the dots were connected between available technology resources, accountability and the successful creation of the optimal learning environment for this student.

The point is this – technology resources are available in nearly every classroom. The sheer number of educational Web sites can be overwhelming. Accessibility tools, such as text-to-speech, speech-to-text, word prediction, voice recording, spelling and grammar checks exist in all operating systems. The list of free educational apps for iPods, iPhones and iPads grows daily. Free technology tools are within our reach and, often, in our classrooms. What is missing? Connecting what we have to what we know how to do.

Technology Integration means making Connections (TIC) across the barriers of Time, Accountability, and Culture (TAC) with the end goal of Teaching within an Optimal instructional Environment (TOE). Anybody up to the challenge?

**"To be honest, I love all of this technology and the idea of an E-Portfolio, but I don't think I could have followed it through if I didn't know you were coming to check on me every week."**

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# Tool Review

*Livescribe Echo Smartpen*

By Wendy Herzan and Bill McLaughlin



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**W**orking in a post-secondary environment in the roles of adaptive technologist and counselor, we routinely review and evaluate devices and software packages to make recommendations for students.

New technology is examined using a comprehensive set of criteria designed to provide the best possible outcomes for student success. In conjunction with standardized assessment tools, questions address the overall efficacy of the device, types of challenges it would best accommodate and whether or not it adheres to the principles of universal design. In addition, the device is evaluated in terms of the individual, to determine if it can be used in conjunction with other learning strategies to maximize independence in the widest range of settings, i.e., vocational, academic and social. All of these factors contribute to a student being able to bridge the gap between their abilities and their potential. Three years ago we had early access to the Pulse LiveScribe Smartpen ([www.livescribe.com](http://www.livescribe.com)). At that time, it couldn't be purchased in Canada nor could we find anyone who was using it with students with disabilities. Since then, the device has gained in popularity and scope of use.

The Livescribe Echo Smartpen, figure 1, ([www.Livescribe.com](http://www.Livescribe.com)) links what is being written with real time audio recording. Utilizing a built-in microphone and an infrared camera located just behind the nib of the pen, and in combination with specialized dot paper, it records audio and synchronizes it with the exact position on the page. A user can tap their notation on any page in the notebook to hear what was being said while they wrote that note. Notes can be made while listening to a speaker and then be "re-listened"

to as often as needed while reading along or adding more to their notes. It is commercially available, both on the Web site and through many retailers in the United States and Canada (Futureshop, Apple, Target etc.). Several bundles are available with the pen that can be purchased, but the standard 4Gb (400 hrs recording time), and 8GB (800 hrs recording time) Echo pen, are \$169 and \$189 (USD) respectively. The newest package of the Echo Smartpen also comes bundled with handwriting transcription software, yet to be tested by this user. It is recommended that students purchase the optional recording ear buds. The ear buds headset allows for more discreet and clear playback and enables complete binaural recording, increasing clarity for larger group and auditorium settings.

Accompanying dot paper (figure 2) for the device can be purchased in a variety of notebook formats or printed from the Web site, reducing ongoing cost. On every page there are buttons that, when tapped, can record, fast forward, stop, pause, jump ahead and bookmark important items. Each page offers various audio speed options, allowing the playback to be sped up or slowed down, accommodating variable auditory processing speeds. It comes with desktop software (figure 3) that allows the user to view, upload, re-listen, organize, search and save all the notes that have been recorded on their pen, or save them to a cloud server for shared use or broadcast. The device is flexible to various academic and workplace settings, discreet, and simple to use. The user can print, write cursively, draw or use symbols; what they wrote is still linked to what was being said at the time. Quality of user handwriting, therefore, does not interfere with use unless it is unintelligible to the user.

Marketed primarily to students and business people, it is an excellent example of a device following the principles of Universal Design (The Center for Universal Design, 1997). It is simple to use, low cost, readily available, flexible for individual preferences (left/right handed) and suitable for settings that vary from small group to lecture auditoriums. Furthermore, the only effort it requires is the ability to press the 'on' button (it's small) and the ability to hold a pen. It also holds the favored position of being a device to which there is no stigma attached. The Livescribe Pen was not designed specifically for and does not require customization for individuals with disabilities, but does have additional "apps" and tools that broaden its utility. Vanschaack (2009) states, "The Livescribe Smartpen is designed, in particular,

to support limitations of human information processing – for all users. Nevertheless, there are significant advantages to using it as a platform to facilitate learning and communication for individuals with disabilities."

The student bundles available include additional color-coded notebooks designed to assist in maintaining organization, a carrying case and recording earbuds. Through the Web site there are fun apps that can increase device adherence, and excellent productivity apps, such as rulers, stopwatches and spelling tests, that can increase utility. The Livescribe Smartpen is being used in many creative ways, such as to make AAC boards, auditory flashcards, a fully interactive tablet, dictionary, word lists to increase vocabulary and more.

The Livescribe Smartpen can compensate for issues with limited concentration, short term memory issues, slower auditory processing, slower hand writing, divided and sustained attention limitations. At our campus and in private practice, it has been successfully implemented with students who have been diagnosed with ADD, ABI, ASD, learning disabilities, mental health issues and medical disabilities.

Students experiencing these challenges at the college level are often referred to as "poor notetakers." Their psycho-educational assessment recommendations for note taking often include the use of a notetaking service, student notetaker or copy of faculty power point notes. There are significant limitations with each of these methods. All reduce a student's functional independence and should only be used when other methods, including the Smartpen, have been attempted. Faculty PowerPoint notes do not capture any classroom discussion, additional information or highlight areas of importance. Notetakers, whether formal or informal, create issues of reliability and consistency, and there is concern over the notetaker's academic abilities influencing student's outcomes. Students using the Smartpen can access their notes immediately and as often as they need, without latency between the date of lecture and receipt of notes. Note taking services were second only to test accommodations in post-secondary education disability service usage, with 67 percent of students reporting using that service at least 70 percent of the time (Stodden, Whelley, Chang and Harding, 2001).

Use of the Livescribe pen addresses two of the most limiting psychological issues associated with students with learning disabilities: learned helplessness and attribution issues (Canino, 1981). Learned



Figure 2, Echo Livescribe Smartpen, and dot paper.

helplessness is defined as the cumulative effect of failure and stress in an academic environment experienced by students with learning disabilities (Thomas, 1979). Learned helplessness can be exacerbated by the less independent note-taking practices and detract from the student's sense of self. The Livescribe Echo Smart pen allows students to rely on their own abilities and engage with their potential in a manner that supports their sense of self as someone who can learn. Attribution issues refer to the student's ability to attribute their success or failure to themselves. The more a student can attribute their performance to themselves the greater their ability to achieve and motivate themselves academically.

Learning strategies recommended to use with the Livescribe can include short hand techniques and mnemonic devices. For students who have severe challenges with hand-writing, we advise that they develop a personal lexicon of symbols or short hand so they can note the most important information during lectures and then utilize the smart pen's features to revisit the information. In conjunction with appropriate learning strategies, students who can communicate primarily with symbols, or parts of words (for example due to expressive dyslexia, aphasia, intellectual delay, ASD, CP) can still, when re-listening, associate their symbols with the moment that the teacher was saying something, review and reorganize their expressive output. Instruction on how to remember and associate and manipulate information further contributes to students managing their own learning.

In contrast to standard digital recorders, the Smart pen avails the student to formulate and relate information to the material they are recording. In addition, the Smart pen's discretion allows the student to not feel like they stand out because of a disability issue.

Another benefit to the device is the scope of application. It can be used in elementary, post secondary and professional settings. In the primary school system, access to regular ongoing support is a struggle. In Canada, students with learning disabilities are unlikely to receive funding for a classroom assistant, and most often have individual education plans (IEP's) that recommend supportive contact with a resource room teacher or additional contact with the classroom teacher. The resource room teacher can review notes and materials that have been sent from class, but the child cannot complete this activity independently and the classroom teacher has limited time to review all the material. The student with the Livescribe Pen can review independently and discreetly or with family support at home, always having the words of the instructor available for re-listening, clarification and learning.

Particularly when paired with behavioral management strategies, this tool can have a significant effect in the classroom for students with disabilities. Student anxiety, poor academic ability and slower task completion are common triggers for off-task behavior and escalation (Shukla-Mehta, Albin, 2003). With the Livescribe pen, the same students can be confident in their opportunity to revisit something later and work at their own pace and ability without fear of what might have been missed, while remaining in the classroom.

Our initial training time for this device has consistently been under one hour. Additional training and ongoing support can be provided specific to student's learning needs. For instance, for students who struggle with sustained attention, we encourage them to write "spaced out + time," when they are losing their concentration (e.g., spaced out 10:00 am), and then leave a blank section of paper. When they regain attention, they note the time on the page (back 10:20 am), and begin again. At any time, they can go back, tap on the "spaced out" and it will begin audio playback from when they were no longer paying attention. They can then add notes as they re-listen. If they do not leave space for additional notes, anywhere they write while listening to the original audio, would then also be linked to that audio.

Using the SETT Framework (Student Environment Tasks and Tools), (Zabala, Bowser, 2005) there is a diverse range of students who could benefit from the Smartpen's features, but comparatively few environments in which it would be utilized, for even fewer tasks. While in an academic or professional setting however, the single task

of notetaking, or the ability to review the presented information is essential. Further, while it clearly assists students who require additional content review, it does not ascertain for students what is most relevant or salient, nor can it aid in writing composition. The Livescribe pen does not read back what the user wrote, but what was being said while it was written. Thorough assessment is required and complementary software and concurrent low/no tech learning strategies are recommended.

One of the first students who acquired the Livescribe Smartpen on our campus had medically based time of day fatigue and concentration issues. She arrived to class on-time, but was exhausted due to her illness (and medications for the illness) both in the early morning and late day lectures. In those courses, but not elsewhere, she had consistently poor grades, even with accommodations and faculty provided notes. The student and her assessment indicated that she is an auditory based learner, but she was too uncomfortable to use a digital recorder. She also anticipated that it was unlikely she would replay six to nine hours of lecture, again at the end of the day, especially when fatigued. Her feedback was that the Smartpen allowed her to write brief notes and highlight areas that she should re-listen to later. Her grades improved and she reported being satisfied with how the device maintained her privacy.

This device can also reach a now marginalized group of students who report experiencing learning difficulties, but are not eligible for disability services. In a study of university assessment outcomes (Crank, Deshler, 2001), 40 percent of students who self-referred for a suspected learning disability, did not meet eligibility criteria for service provision after assessment. These students self-referred, were struggling academically and most had clinical symptoms, but above the cut off rate for diagnosis. As our collective interest in differentiated learning grows, it is best practice to plan for the multiple learning modalities we are going to meet in our classrooms. Many academic institutions have adopted learning libraries of devices and tools to aid in self-directed learning for the variety of modalities for all learners. However, even if this is not available, the lower cost of the Smartpen makes it as accessible as the average cell phone. The Livescribe Echo Smartpen is cost efficient, discrete, capable of assisting students with a wide range of learning needs and fosters the goal of independent learning. The device supports the desired outcome of a student

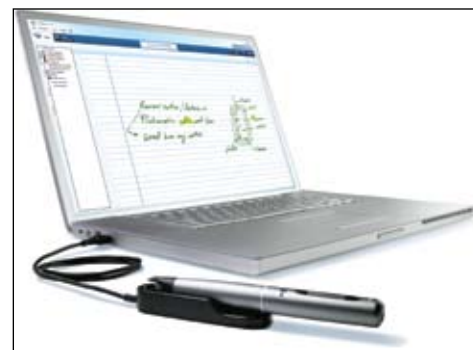


Figure 3, Livescribe desktop software Echo pen and USB Charging cable.

taking greater control over their learning and, ultimately, their success.

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# “Friends, Romans, Countrymen, lend me your ears...”

*An Analysis of*

# Speech Recognition Software

– its current trend and future potential for students with dyslexia in an educational setting

**The purpose of this article** is aimed at discussing the concept of voice recognition software, its educational uses within a classroom and the problems associated with this technology, as well as briefly describing its future potential for students with dyslexia. Readers will first be presented with background information about this technology commonly called speech recognition software. This will be followed by a detailed description of the different classes of speech recognition applications and their general uses. The factors involved in adopting speech recognition software within an educational setting and the problems posed by using it will also be described. The document will provide the reader with information about the areas where speech recognition software could be of potential use within an educational setting.

The next part of the article will concentrate on describing experiments designed to assess the impact of using different types of voice recognition software by students with dyslexia and how it impacts their studies. Although voice recognition software is regarded as being just another “writing tool,” using the Windows Vista speech recognition plug-in or Microsoft Word 2003 speech plug-in technology does hold potential for use as a learning and writing tool within the area of education. Other practical examples in using this technology would include teaching infant children how to perform tasks, like learning the alphabet, learning phonics or even providing support to older students in the area of reading tuition or learning a foreign language. On the contrary, this tool could be problematic for younger pupils who are learning how to read, due to pausing and mispronouncing words as they speak. Another difficulty lies in the fact that teachers would have to devote a large amount of time on a one to one basis in using this technology to support students with their reading. This article attempts to debate these themes as follows.

## INTRODUCTION

The use of voice recognition software has become an active area of research by transforming the way people communicate via the human voice. Lai, Lu and Zhao (2002: 140) state this tool is providing a natural way for humans to interact with machines, and as Venkatagiri (2002: 326) outlines, it is a type of technology that holds great promise in overcoming potential hurdles for individuals with communication disorders. The use of speech recognition software as a type of computer input method is becoming as widely popular as using a computer mouse and keyboard due to a number of factors, like technological improvements, lower cost of powerful computers and the possibility of potential savings in cost and effort (Venkatagiri (2002: 326). Despite that, speech recognition software is a relatively new technology, is being constantly refined and is by no means flawless (Read, 2001,

cited in Nicol, Casey and MacFarlane, 2002: 2). The difficulty associated with “speaking” is that it can be quite effective for human to human interaction but can present a lot of difficulty for human to computer interaction (Shneiderman, 2000: 1). As more newer voice recognition products are being launched in the area of special educational technology and within the field of education, so are more features becoming more readily available for students to use in their studies.

## WHAT IS VOICE RECOGNITION SOFTWARE?

Honeycutt (2004: 294 – 295) describes voice recognition software as being a tool that allows users to “speak into a headset and see their words appear instantly on the computer screen with varying degrees of accuracy.” From a technical point of view, this is a type of technology whereby “a



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microprocessor-based system, typically a computer with sound processing hardware and speech recognition software responds in predictable ways to spoken words and/or converts speech into text' (Venkatagiri, 2002: 323). This software facilitates another method to keyboard typing (Lerner, 2000: 455), but the majority of users who use this technology are users with disabilities or individuals with exceptionally poor keyboarding skills, but as Mortimore (2003: 238) states, it has also been used to provide an efficient method of communicating via the human voice. Honeycutt (2004: 295) makes the claim that speech recognition software has the possibility of being an exceptionally useful and versatile technology for acting "as a useful bridge between the spoken and written word," but this bridge is dependant on certain cultural and technological factors (Honeycutt, 2004: 296). Consequently, if this potential can be fully realized, it will establish itself as being an "emerging technology" designed to support multiple literacies (Honeycutt, 2004: 295). Voice recognition software is being used in a variety of fields, like operating appliances and machinery (Venkatagiri, 2002: 323), hands-free dialing of cellular phones (Sprint PCS, 2001 cited in Venkatagiri, 2002: 323), voice commands in video gaming (Mindmaker, 2001, cited in Venkatagiri, 2002: 323) or even voice biometrics (Venkatagiri, 2002: 323). Different classes of speech recognition software exist and will be addressed as follows.

## CLASSES OF SPEECH RECOGNITION SOFTWARE

Venkatagiri (2002: 324) describes speech recognition software applications as being categorized into three classes: the vocabulary size that the software is capable of recognizing, the speech input type that can be processed and the amount of training that the application requires (Gandhi, Kuryliak and Kempster et al, 2000, cited in Venkatagiri, 2002: 324). These items are presented in Figure 1 as follows:

### VOCABULARY SIZE

The size of vocabularies that exist in speech recognition programs can be classified as being small, medium or large. Small vocabulary programs are usually suitable for operating a computer or other types of equipment or even obtaining information from a database or from limited data entry applications (Venkatagiri, 2002: 324). Medium vocabulary speech recognition programs are suitable for data entry and data query applications, while large vocabulary can be used for general-purpose dictation (Venkatagiri, 2002: 324).

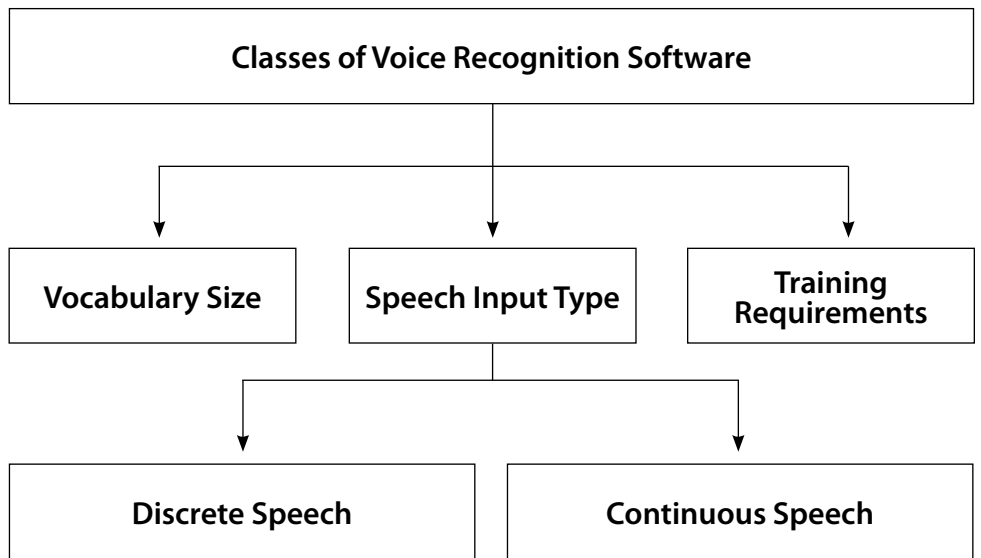


Figure 1: Classes of voice recognition software

### SPEECH INPUT TYPE

Mortimore (2003: 238) outlines two styles of speech input that exist in voice recognition software: discrete speech and continuous speech.

#### DISCRETE SPEECH

Follansbee and McCloskey-Dale (2000: 1) describe discrete speech as being an older type of application that requires users to speak one word at a time. Venkatagiri (2002: 324) also points out that this technology requires a pause after each word and are applications used for "command and control" programs or even "data entry applications". Honeycutt (2004: 314) explains that these types of early voice recognition systems were quite "clumsy, inaccurate and awkward" because they were designed on discrete speech recognition models whereby users had to pause between every word for the system to parse their speech. If users are to dictate the command "open file," "close file," "save file" etc., it is regarded by the software as an individual word that requires a specific action. Follansbee and McCloskey-Dale (2000: 2) make the point that although discrete speech recognition software works at a slow speed and never made international market success, this program has been found to be a better tool for certain types of students with learning difficulties or motor speech difficulties where continuous speech failed to address their problems. According to the authors, students with learning difficulties find the pacing and operational style provided by discrete speech better suits their text production style. Discrete speech provides a slower pace for students with learning disabilities to work with and also matches

their own style and pace in creating written text, and the manner of correction makes it easier for students with learning difficulties to locate their errors and make corrections (Follansbee and McCloskey-Dale, 2000: 2).

#### CONTINUOUS SPEECH

Follansbee and McCloskey-Dale (2000: 1) explain continuous speech as being a type of application that "allows the user to dictate by speaking at a more or less normal rate of speech" or as Mortimore (2003: 238) describes it, "the user speaks at a natural pace." This type of software is gaining more acceptability and use within the market field. Venkatagiri (2002: 324) explains that continuous speech recognition applications can "recognize individual words in continuous, natural sounding utterances" and is now regarded as the "standard" method for dictation.

#### TRAINING REQUIREMENTS

The issue of "adequate training" is a very important issue for the successful/unsuccessful use of voice recognition software and how it targets the specific characteristics of the individual using the technology (Follansbee and McCloskey-Dale, 2000: 2). It is not enough for an individual to know how to operate the software, but the real skill is in knowing how to "dictate to produce the best results" (Follansbee and McCloskey, 2000: 2). This procedure can be compared to learning how to type in terms of length of time spent achieving a high level of independence (Follansbee and McCloskey, 2000: 2). Venkatagiri (2002: 324) explains that speaker "independent" speech recognition programs, used for tasks like commands or control and data entry applications, do not require training, whereas speaker "adaptive"



speech recognition programs frequently update speech data used for speech recognition when successful speech recognition is passively confirmed through the absence of error correction. It has been found that these types of applications are not well suited for the task of dictation because users are required to correct all errors as they occur, hence, this is why many users find it easier, convenient and more efficient to append faults using a keyboard (Venkatagiri, 2002: 325). The author makes reference to the fact that these types of applications require users to participate in training or enrollment before the speech recognition software can be used. The amount of training required differs between packages and usually takes users between 15 and 30 minutes to read the text. As a result of participating in this training, the application uses this "speech sample" to build up an acoustic model of the user's speech along with pre-packaged phonetic, phonotactic and lexical data specific to the language that forms the basis for speech recognition (Venkatagiri, 2002: 325).

### **FACTORS IN ADOPTING / HINDERING SPEECH RECOGNITION SOFTWARE WITHIN AN EDUCATIONAL SETTING**

Although many hardware and software factors affect the decision in individuals using voice recognition software, on a more complex level, environmental, educational and human factors do contribute to the overall success or failure of using this technology within an educational setting.

For example, certain hardware elements, such as computer speed, computer memory, sound card and/or microphone (Newman, 2000 and Gandhi et al, 2000 cited in Venkatigiri, 2000: 328) all play a significant part in the overall successful use and enjoyment of dictation software. But on a more important scale, human factors, like background noise or even an individual's speaking style, and environmental conditions, like training, all play their own role in speech recognition software use (Newman, 2000 and Gandhi et al, 2000 cited in Venkatigiri, 2000: 328). The researchers also make the point that although modern dictation software applications expect continuous speech, users should avoid pausing between words, which is detrimental to speech recognition accuracy.

From an educational perspective, Follansbee and McCloskey-Dale (2000: 2) draw the readers' attention to the fact that certain human and environmental factors, like identifying resource teachers in terms

of technical support for computer use and familiarity with speech recognition software to assist the student; providing staff training in the use of this software; identifying more than one location where the student can use speech recognition satisfactorily; and providing sufficient instructional support for the student to catch up on writing opportunities, are issues to be considered when using this technology. The organization TypeWell (2009: 1) claims that although using speech recognition software within the classroom is classified as being the perfect type of technology to use for "classroom communication access," this technology is unsuitable because of high error rates and the fact that exceptionally high accuracy is needed to preserve the adequate meaning of sentences (TypeWell, 2009: 3). TypeWell (2009: 1) also states that achieving proficient accuracy in using voice recognition software is guaranteed when it's used in a quiet room and a male speaker with accurate dictation reads prepared text at a measured pace. In a typical classroom, children would have to deal with factors like spontaneous speech, background noise and movement of the speaker. Even teachers' use of emotion, colloquialism and grammar in spontaneous speech can impede against using speech recognition technology in the classroom.

Fairweather, Nix, Oblinger, Adams and Laffra (1998, cited in Williams, Nix and Fairweather, 2000: 117) present their argument against using voice recognition technology in the classroom by stating that many combined factors make the evaluation of speech quite a difficult task to accomplish for even those who are accomplished readers e.g. oral reading presents a lot of pauses, omissions, repetitions, insertions and mispronunciations. Another factor, like background noise, may also interfere with the child's speech level. The positioning of a microphone could be too close or too far away from the user's mouth.

Despite that, Nicol, Casey and MacFarlane (2002: 1) are of the opinion that areas where speech recognition could be of potential value in an educational setting are in the area of infant teaching, which includes tasks like learning the alphabet, learning phonics, or creative writing, or for older children, which might include pronunciation improvement (Russell et al, 1996, cited in Nicol, Casey and MacFarlane (2002: 1), reading tuition (Mostow, 1994, cited in Nicol, Casey and MacFarlane, 2002: 1), and possibly foreign language tuition (Eskenazi, 1996, cited in Nicol, Casey and MacFarlane, 2002: 1). Two problems present themselves

immediately when using speech recognition software in a school setting, especially for younger children, as addressed by Williams, Nix and Fairweather, (2000: 117). Firstly, younger readers are only beginning to learn how to read and are more likely to pause and mispronounce words (Williams, Nix and Fairweather, 2000: 117). Secondly, teachers and parents would need to invest a large amount of time on a one to one basis with these children in assisting them to read (Nicol, Casey and MacFarlane, 2002: 1). The issue about training the recognition engine also appears to be one of the main problems in using the technology, whereby this facility can be at least simplified to make it practical for use within a school setting (Nicol, Casey and MacFarlane, 2002: 10). Other problems that can occur are how well will training compensate for other regional dialects, how well would children accept failed recognition and how well does the system perform in a typical classroom? (Nicol, Casey and MacFarlane, 2002: 10). The following studies make an attempt to provide readers with an idea of where and how voice recognition software was used by students with dyslexia, at both post primary school and at third level, and to summarize the factors that contribute to the overall use of this technology.

### **STUDIES EXAMINING DYSLEXIC STUDENTS' USE OF SPEECH RECOGNITION SOFTWARE**

One study carried out by Roberts (2002: 1) attempted to determine if voice recognition software could assist in overcoming some of the barriers that exist for individuals with learning disabilities and also to establish if the use of these programs was an effective compensating strategy in postsecondary education. A number of participants were recruited from three postsecondary institutions and were based on two sets of criteria: postsecondary students who were eligible for services at the institution and those students who were classified as being learning disabled. These individuals were taught how to use the software and were requested to use it under the following guidelines: produce three writing samples, record the number of hours that they spent using the software, and finally, complete a pre-training and post-training questionnaire. Each of the writing samples provided were graded using Fry's Readability Graph. The results found by Roberts (2002: 2) determined that using voice recognition software was not a "statistically significant compensating strategy" for postsecondary students with learning disabilities. Two

out of 15 students used the software quite regularly and one student used it intermittently. One student remarked to have found this software of immense value, while three others indicated they found learning a new software program to be too time consuming while meeting their academic demands. Roberts (2002: 2) found that even after the students had participated in a certain number of voice recognition software training lessons, the application still did not recognize their voices accurately enough to be helpful to all individuals.

Nelson and Parker (2004: 1) carried out another study to investigate the usability problems of voice recognition software for students with dyslexia. Eleven pupils, between 12 and 14 years of age with reading ages between nine and 10 years were selected for the study. The experiment was carried out over three days and over two 55-minute sessions. There were two primary tasks involved in the project – a structured text input and a spontaneous text input. The structured text input was divided into a series of sub tasks – a dictated handwritten piece of text, (a typed dictation of the same piece of text into a computer using a keyboard and voice dictation of the

same piece of text using the voice recognition software. The spontaneous text input was also divided into a series of sub tasks – children are shown a title for a story and a collection of pictures, the children are asked to invent their own story and, at the same time, dictate the information using the voice recognition software (Nelson and Parker, 2004: 2). The results showed that the most current version of the software demonstrated a faster voice input than the older version used in a previous study. In addition, voice input was up to eight times faster than typing and five times faster than hand writing (Nelson and Parker, 2004: 2). On the other hand, Nelson and Parker (2004: 2) state that the original study showed higher levels of accuracy in terms of voice input, which was due to time factors relating to the level of training for each student's voice reproduction within the software.

Another study carried out by Phayer (2009: 83 (a)) examined how third level students with dyslexia use the speech recognition tool plug-in in Microsoft Word 2003. For this experiment, there were eight participants, each studying a variety of courses and registered in an assistive technology training program (Phayer, 2009:

88 (a)). The students were observed over a four-week course and the data gathered utilized questionnaires and observations. The participants were assessed in how they managed learning to participate in the speech training activity and to record the difficulties and/or successes they experienced in using it (Phayer, 2009: 88 (a)). This was followed by analyzing how the same group of students managed dictating numbers, dictating single individual words in order to train the system to better understand their dialect and pronunciation and also how they managed dictating a variety of commonly used commands in Microsoft Word (Phayer, 2009: 89 (a)). The final part of the study specifically examined how the students managed using the same tool for dictating text and other information (Phayer, 2009: 90 (a)). The results of the study showed these students succeeded in using the speech recognition tool when it came to dictating single words, numbers and many commands in Microsoft Word 2003 word processor, but struggled with the technology when it came to participating in the initial training setup process. No single feature of the Microsoft Word 2003 speech recognition tool emerged as being extremely useful. The initial training setup and the dictation of sentences did produce teething problems, but over time, these difficulties lessened with further training. The dictating commands and dictating numbers tool was considered to be very useful. Overall, the students indicated that this plug-in would be very useful for dictating essays, reports, numbers into tables, as well as using it to read back information and listen to the spelling of words in their studies (Phayer, 2009: 91 (a)).

Another study carried out by Phayer (2009: 13 (b)) describes an experiment that looked at measuring the effectiveness of third level dyslexic students' use of the dictation facility in Windows Vista as a primary method of dictating information and controlling the operating system, all by voice. A case study technique was adopted and the researcher used a mixture of observations and interviews to find out how the students managed using the technology in their studies and to discover any underlying problems with it (Phayer, 2009: 13 (b)). The findings that emerged demonstrated high success rates for those students who dictated commands and sentences but, at the same time, problems emerged for those who partook in the initial training setup process (Phayer, 2009: 16 (b)). Although no single feature presented itself as being extremely useful or difficult, the overall consensus indicated that the



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students enjoyed using this speech recognition tool, unlike using other similar tools in other software. The findings also found that if the students participated in numerous training passages, as well as remembering to speak clearly and distinctly, they achieved better accuracy (Phayer, 2009: 16 (b)). This is similar to findings reported by Zafar, Overhage and McDonald (1999 cited in Venkatigiri, 2002: 328) who emphasize the fact that users who use speech recognition software should “speak clearly and continuously and distinctly pronounce all syllables.”

#### Summary

New advancements in speech recognition technology are changing how individuals interact with information communication technology and the outlook for students with dyslexia who use this technology as a learning tool in their exercises is both promising and daunting (Venkatigiri, 2002: 330). Successful use of voice recognition software is not just simply about producing more text in a faster way. From an educational perspective, it is about trying to identify methods and ways in which this tool can compensate for certain difficulties experienced by the student with dyslexia in a classroom environment. Speech recognition software is often classified as being a continuum of writing technologies that evolve from pencil to voice input (Follansbee and McCloskey-Dale (2000: 2)). In order for this voice recognition software to be used successfully by students who are struggling readers, school staff, colleges and parents must readily identify the benefits of using this technology for the individual and be determined to make it work. The real success in using this technology for students with dyslexia who struggle with the concept of reading is calculated in terms of “better performance on a variety of writing tasks in school, slowly increasing independence in producing written work and making more positive perceptions of themselves as writers and students” (Follansbee and McCloskey-Dale, 2000: 3).

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# 29<sup>th</sup> Annual CONFERENCE

## Closing The Gap

OCTOBER 12-14, 2011  
Preconference Workshops  
October 10-11, 2011  
MINNEAPOLIS, MINNESOTA



The best educational  
assistive technology  
conference in North  
America

### *Assistive Technology in Special Education and Rehabilitation*

**A TRADITION OF EXCELLENCE** Over the years, the annual Closing The Gap Conference has become known as the best educational assistive technology conference in North America.

Through shared best practices and research, networking, training, hands-on opportunities and an expansive exhibit hall, participants have found information, strategies and products that have proven beneficial and, oftentimes, unsurpassed for use in their work and in their lives.

The 29th Annual Conference runs Monday, October 10th through Friday, October 14th and is held in Minneapolis, Minnesota.

Preconference workshops are scheduled for Monday and Tuesday, October 10th and 11th, and the Conference officially begins with a preview of the exhibits on Tuesday evening, followed by three days of presentations, hands-on labs and exhibitions.

Varied levels of participation are available, with registration options listed on page 44.

Inside the next few pages, you will find detailed

listings of the 24 all-day preconference workshops, exhibitors contracted to date and academic credit/CEU, air travel, hotel and registration information. The titles and descriptions of the over 200 one- and two-hour presentations, including hands-on labs and iPod / iPad workshops, and the additional contracted exhibitors will be available online and in print in August.

With multiple registration options available, numerous and diverse discounts, group savings and preconference workshop bundling, we invite you to participate and encourage you to bring your team!

Closing The Gap promises to work hard to insure that the content and learning opportunities are many, varied and exceptional throughout the conference week.

### 24 PRECONFERENCE WORKSHOPS

Closing The Gap preconference workshops are all-day, in-depth workshops presented by experts in the field in very practical and effective ways. The content and delivery are unsurpassed and the resulting outcomes for persons with disabilities are overwhelmingly positive and bright.

Many of this year's workshops are new, some advanced, with state-of-the-art technologies being addressed and best practices demonstrated and taught.

### OVER 200 PRESENTATIONS

Practical and expert-lead presentations during the Closing The Gap Conference will include over 200 one- and two-hour sessions that describe and/or demonstrate successful applications of assistive technology for persons with disabilities. Select handouts will be available onsite and online following the conference.

### COMMERCIAL EXHIBITS

An impressive and varied scope of AT products will be on display and will range from low tech to high tech and represent solutions for all disabilities and ages. Daily regular AND exclusive hours are scheduled to give participants quality time to explore, try, learn and ask questions, first-hand and face-to-face.

A second brochure detailing the over 200 presentations will be available on or about August 1, 2011. Details will also be posted at our Web site.

LEARN MORE AT [WWW.CLOSINGTHEGAP.COM](http://WWW.CLOSINGTHEGAP.COM)



**WHO SHOULD ATTEND?** ANYONE interested in finding practical and readily available AT solutions for ALL disabilities, mild to significant, infant through adult.

- Teachers
- Administrators
- Speech Language Pathologists
- Occupational Therapists
- Physical Therapists
- AT Consultants
- Technology Specialists
- Consumers
- Parents
- Students

**WHY ATTEND?** Participants will have numerous and unique opportunities to learn, first-hand, from experts in the field, network, ask questions, and see and try the latest AT products and strategies available today.

## CONFERENCE SCHEDULE

### Sunday, October 9

5:00 pm - 8:00 pm ..... Registration Desk Open

### Monday, October 10

7:00 am - 8:00 pm ..... Registration Desk Open

8:00 am - 4:30 pm ..... Preconference Workshops

### Tuesday, October 11

7:00 am - 9:00 pm ..... Registration Desk Open

8:00 am - 4:30 pm ..... Preconference Workshops

5:00 pm ..... Complimentary Hors d'oeuvres

*Sponsored by Care Innovations an Intel • GE Company*

5:30 pm - 8:00 pm ..... Preview of Exhibits

### Wednesday, October 12

7:00 am - 5:30 pm ..... Registration Desk Open

8:00 am - 4:30 pm ..... Presentations

\*10:00 am - 5:30 pm ..... Commercial Exhibits

### Thursday, October 13

7:30 am - 5:30 pm ..... Registration Desk Open

8:00 am - 4:30 pm ..... Presentations

\*10:00 am - 5:30 pm ..... Commercial Exhibits

### Friday, October 14

7:30 am - 2:00 pm ..... Registration Desk Open

8:00 am - 1:30 pm ..... Presentations

9:00 am - 1:30 pm ..... Commercial Exhibits

*\*The exhibit floor will close for an exhibitor break from 12:30 pm - 1:30 pm.*

## AAC INSTITUTE CEUS

AAC Institute will again provide CEUs for both the conference and pre-conference workshops. CEUs will be offered for all sessions without charge. AAC Institute CEUs that relate to the practice of speech-language pathology and audiology can be used for ASHA certification maintenance. RESNA accepts AAC Institute CEUs for ATP/ATS credential maintenance. Most state licensure systems accept AAC Institute CEUs or other forms of self-reporting.

Pre-conference workshops are offered for up to 1.4 CEUs. The conference is offered for up to 2.0 CEUs. For additional information visit [www.aac-institute.org/CEUs](http://www.aac-institute.org/CEUs).

CEU details and documentation will be available at the Closing The Gap registration desk located on the second floor of the Sheraton.

## CERTIFICATES OF ATTENDANCE

Closing The Gap-issued Certificates of Attendance for conference participation will be available upon request at no additional fee. All preconference workshop participants will receive a Closing The Gap-issued, presenter-signed Certificate of Preconference Workshop Attendance upon completion of the workshop.



## ACADEMIC CREDIT

Graduate-level academic credit from Hamline University is available for a variety of levels of conference attendance. Participants will have the option of one, two or three full semester credits.

### ONE FULL SEMESTER CREDIT

**Cost: \$128**

#### Requirements:

- 12 contact hours
- An outside assignment

(12 contact hours require conference participation or two preconference workshops.)

### TWO FULL SEMESTER CREDITS

**Cost: \$256**

#### Requirements:

- 24 contact hours
- An outside assignment

(24 contact hours require conference participation AND at least one preconference workshop.)

### THREE FULL SEMESTER CREDITS

**Cost: \$384**

#### Requirements:

- 36 contact hours
- An outside assignment

(36 contact hours require conference participation Wednesday - Friday AND two preconference workshops.)

# PRECONFERENCE WORKSHOPS

Monday and Tuesday, October 10-11, 2011

## Monday and Tuesday,

October 10 - 11, 2011 8:00 am - 4:30 pm

### **PC-1 Multi-Modal Communication Strategies for Children Who Have Complex Communication Needs - PODD Communication Books (Two-Day Introductory Workshop)**

Children who are non-speaking or have only limited speech, in addition to other challenges, often struggle to interact and communicate. This may include children who have physical disabilities, multiple disabilities, sensory processing challenges, limited social interaction skills and/or a range of cognitive limitations and learning difficulties. This two-day workshop will demonstrate the use of a Pragmatic Organization Dynamic Display (PODD) approach developed by Gayle Porter (Melbourne, Australia). Generic templates for multi-page "light tech" communication books have been carefully designed to support genuine communication for a variety of functions throughout the day. These templates may be customized for a range of access methods and other individual needs. Come learn strategies for creating multi-modal language learning environments that provide receptive models and expressive opportunities for language development. Learn strategies for teaching and using PODD with children and their communication partners. Videos and case examples will be shared. Participants will have an opportunity for hands-on practice with PODD communication books. There is a \$15 fee for the PODD course manual in addition to the \$490 cost of the two-day workshop.

*Linda J. Burkhart, B.S., is a Special Educator/Augmentative Communication Specialist/Technology Integration Specialist in private practice, Eldersburg, MD and Dale Gardner Fox, M.S., RPT, is an Assistive Technology Consultant, Hampshire Educational Collaborative, CCAT, Northampton, MA.*

## Monday, October 10, 2011

8:00 am - 4:30 pm

### **PC-2 An Introduction to the iPad and iPod touch as Assistive Technology Solutions**

Originally developed for the consumer market, the iPad, iPod touch and iPhone have proven to provide a wealth of possibilities for assistive technology. We will start by teaching you all about the use of these devices, iTunes and school deployment. Subsequently, we will combine demonstration with a hands-on lab experience on the iPad with applications for sign language, for planning, for story telling, for reading/writing, for AAC and much more! You will learn how these solutions can make a difference for people with various disabilities, such as traumatic brain injuries, autism, fluency disorders, mild cerebral palsy and others. At the end of the day, you will know what hardware and applications to recommend and you will have learned to use some of the most promising AT applications available. (Hands-on activities will be conducted on Closing The Gap-provided iPads - one iPad for every two participants.) There is a \$20 fee in addition to the cost of the workshop.

*David Niemeijer, Ph.D., is the CEO, AssistiveWare, Amsterdam, Netherlands; Mark Coppin, B.S., is an Apple Distinguished Educator and the Director of Assistive Technology, Anne Carlsen Center for Children, Jamestown, ND; Eric Sillers, M.A., CCC-SLP, is a Speech Language Pathologist and Assistive Technology Specialist, La*

*Mesa-Spring Valley School District, La Mesa, CA; Jennifer Marden, M.S., M.A., is a Speech Language Pathologist, Technically Speaking, Roslindale, MA; Martijn Leopold, MSc., is the Chief Technical Officer, AssistiveWare, Amsterdam, Netherlands; and Cathy Kingeter, M.A., is the Director of Sales and Marketing, Origin Instruments Corp., Grand Prairie, TX.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-3 "Help! I'm an AT Specialist and I Can't Get Up!" Creating Manageable School-Based AT Services**

Feeling the pressure of delivering AT services in your district? Well, we are a handful of folks serving a large district of over 63,000 students in approximately 95 schools and we're here to help. We know that many AT professionals working actively in the schools are left with little or no time to assess their programs, develop targets for change and produce a focused plan to address these targets. This workshop will provide an active program analysis and opportunity for attendees to develop a plan to improve their services and meet the needs of students, staff and families. Specific elements addressed in the planning process will include differentiated referral systems (e.g., high and low incidence), consultative services, systems of follow-up, training and technical assistance, equipment management, documentation, participation in district planning and initiatives, methods of self-evaluation and reporting, and strategies to build site capacity for AT decision making. Networking, brainstorming, practice and discussion will be an integral part of the workshop and ample resources will be disseminated to allow participants to leave with ideas for immediate change.

*Keri Huddleston, M.A., CCC-SLP, is an Assistive Technology Specialist, Moira Soulia, M.S., CCC-SLP, is an Assistive Technology Specialist, and Teru Langsdale, M.S., CCC-SLP, is a Special Education Consultant, all, Washoe County School District, Reno, NV.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-4 Integrating Augmentative Communication and Augmentative Mobility: Equipment options and teaching strategies needed when supporting independence in the use of access for powered mobility and AAC and computer access for both the experienced user and the beginning user**

Powered chairs and augmentative communication systems (and/or computer access) need to work together. These systems can be physically configured to work together, but are frequently NOT. We will share what powered systems are currently available, how the programmable electronics and hardware need to be set up to allow integration with augmentative systems and computer access. We will also share strategies needed for teaching and supporting this integration with specific students and learning in mind.

*Karen M. Kangas, OTR/L, ATP, is an Occupational Therapist, AT Specialist, Seating and Mobility Specialist and Clinical Educator in private practice, Karen M. Kangas OTR/L, Shamokin, PA and Lisa Rotelli, A.S. in Physical Therapy, is an Educational Consultant, Adaptive Switch Labs, Inc., Spicewood, TX.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-5 Capturing the Power of Visual Strategies: Meeting the Communication, Behavior and Social Skill Challenges in Autism Spectrum Disorder and Related Learning Needs**

Most students with autism or Asperger's syndrome and many with related communication challenges are visual

learners. This observation has tremendous implications. Their social skill and behavior difficulties are frequently related to their communication difficulties. While it is common for educational programming to focus on enhancing expressive communication, comparatively little attention is directed toward supporting the student's ability to understand. This program will demonstrate how even students with a lot of verbal language can experience a significant challenge with communication. Capitalizing on their strengths, expanding the use of visual strategies helps students organize their lives, significantly reduces behavior problems and improves successful social participation. A range of simple low tech strategies will be emphasized, along with high tech options, like video. This program will define the need, discuss training and demonstrate many practical ideas for helping students participate effectively in life opportunities.

*Linda Hodgdon, M.Ed., CCC-SLP, is a Consultant for Autism and Related Learning Challenges and the Director, Cornerstone Communication Center, Troy, MI.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-6 Getting Writing on the Radar for Students with Significant Disabilities, Including Deaf-Blindness**

From the very start, writing is an unquestioned component of literacy development for children without disabilities. However, for children with significant disabilities, including deaf-blindness, writing is often impossible due to their vision, speech and motor problems. Many of these students may have unknown cognitive skills and may not even know the alphabet, yet educators are faced with the overwhelming task of helping these students become writers. This workshop will focus on getting writing on the radar for these students. Individual and group emergent writing activities connected to state standards will be demonstrated, along with teaching strategies, sample goals, informal assessment methods and ways for students to write and scribe using "alternative pencils" that do not require hand use. Videos and very beginning writing samples will be shown of real students with significant disabilities in preschool to high school classrooms.

*Gretchen Hanser, Ph.D., is the Director of the Deaf-Blind Model Demonstration Classroom Project, Center for Literacy and Disability Studies, University of North Carolina, Chapel Hill, NC and Toy Dills Booth, M.Ed., NBCT, is a Special Educator, The North Shelby School, Shelby, NC.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-7 Using 21st Century Tools for Teaching and Accessible Learning**

Teaching and learning can take place anywhere and from a variety of devices - computers, iPhones, iPods, digital pens, the Internet or electronic paper. Create an engaging and accessible learning environment by integrating a mix of free and inexpensive Web 2.0 tools for writing, creativity, support, research, assignments and more! Utilize multi-use classroom response programs and send instructions, texts, quizzes or forms to iPods, iPads or computers, then display responses immediately onscreen, with grades, comments and more! Infuse the learning environment with wireless document cameras, digital pens, wifi-enabled digital microscopes accessible by iPads or iPods and switch-accessible word prediction programs on iPods or iPads. Import video and digital images into these devices as teaching and learning lessons. Use the cloud for free file storage and management between devices, collaborative projects and more! Learn

to connect these technologies together, from the hardware to the software, within a cohesive web of connectivity and sharing. (Hands-on activities will be conducted on PC and Macintosh computers.)

*Dan Herlihy is an Assistive Technology/Technology Resource Specialist, Connective Technology Solutions, Inc., Hoosick, NY and Liz Medvetz is an Applications Training and Support Specialist, University at Albany, Albany, NY.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-8 Help is Just a Fingertip Away! Exploring AIM Center Tools for Educators and Families**

In this workshop, Joy, Diana and Joan will lead participants through an action-packed day of demonstrations, strategizing and hands-on experiences with the free and low cost tools available from the National Center on Accessible Instructional Materials (the AIM Center). Each product will be explored via guided practice, with scenarios and independent practice with case studies. Participants will walk away with copies of the AIMing for Achievement DVD and other tools, along with the knowledge of which tools should be used for which task and the skills needed to use the tools yourself and to lead others in using them so that students have what they need to participate actively and AIM for Achievement! Given the practical nature of this hands-on workshop, participants MUST bring their own laptop computer that includes a wireless network card and a Web browser to the workshop.

*Joy Smiley Zabala, Ed.D., ATP, is the Director of Technical Assistance, CAST and the National Center on AIM, Lake Jackson, TX; Diana Carl, M.A., LSSP, is an Independent Consultant, Houston, TX; and Joan Breslin Larson is a Supervisor, Special Education Policy Division, Minnesota Department of Education, Roseville, MN.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-9 CREATING PDFs in Special Education**

PDFs are becoming more and more important file types for today's special education professional. Teachers need to be able to create PDFs so that their students can have a digital copy of the text or notes, a digital worksheet, a modified chapter and more. In this intermediate to advanced hands-on workshop, participants will learn how to create a variety of PDF files from both digital and print originals. We'll compare free and inexpensive PDF creation programs to Adobe Acrobat Professional 10, and then spend most of the day learning how to create, modify and adapt PDFs for student and professional use with Acrobat. You'll learn how to enable, extend features, use annotations and commenting, add hyperlinks, create talking PDFs, make PDFs readable, create presentations, create custom stamps for use on maps, measure, modify worksheet PDFs and more! We'll also feature the new parts of Acrobat 10 for users of previous versions. (Hands-on activities will be conducted on Closing The Gap-provided Mac computers - one computer for every two participants; OR, participants are welcome to bring their own laptop computer [Mac or PC] with Adobe Acrobat Professional version 10 pre-installed.) (Note: Although not mandatory, it is encouraged that this Creating PDFs workshop be followed by Tuesday's Using PDFs workshop. Taken sequentially, these two workshops offer comprehensive PDF training and skills.)

*Judith P. Sweeney, M.A. Special Education, is an AT Consultant and the President, Onion Mountain Technology, Inc., Canton, CT.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-10 Every Move Counts, Clicks and Chats - ASSESSMENT Strategies: Getting the Information You Need for Individuals with Significant Sensory/Motor Needs**

This workshop is appropriate for all professional skill levels and will focus on assessment protocols that support identification of purposeful motor patterns, motor access options, motivating consequences, current communication

strategies, system content and appropriate symbol systems for individuals with significant sensory/motor differences. These assessment tools are components of Every Move Counts, Clicks and Chats. They include the Sensory Assessment, Probes, Communication Survey, Symbol Identification, Purposeful Switch Use and Voice Output Feature Assessment. This workshop is the foundation for all implementation strategies that will be presented in Tuesday's Implementation workshop. (Note: Although not mandatory, it is strongly recommended that this Assessment workshop be followed up with Every Move Counts, Clicks and Chats - Implementation [on Tuesday] in order to better understand how to build on the information that will be gathered through the assessment process.) There is a \$75 materials fee (manual) in addition to the cost of the workshop.

*Jane Korsten, M.A., is a Speech Language Pathologist, AT Resource Specialist and Co-Author of Every Move Counts, EMC Communication Inc., Leawood, KS and Terry Foss, M.Ed., is an AT Resource Specialist and Co-Author of Every Move Counts, EMC Communication Inc., Lee's Summit, MO.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-11 Teaching Reading When Students are at Emergent Level: For Students with Autism and Other Severe Disabilities of All Ages**

This fast-paced workshop looks at the important development of emergent literacy skills for children with autism and other severe disabilities. Extensive video clips highlight the importance of relationship development, adapted supported reading and sound and letter play/work. Woven throughout are the foundational underpinnings of augmentative communication and technology. Participants will leave with an understanding of how to use supported readings and how to establish communication and interaction around reading with students with more severe disabilities. An understanding of the Building Blocks Model will be established and adapted in light of working with children who are non-verbal. The morning will cover the building blocks of supported reading, concept and vocabulary development and print concepts. The afternoon will cover the building blocks of phonemic awareness, writing and letter names and sounds. This workshop is perfect for special education teachers who are working with young or older students who are at an emergent level developmentally or cognitively. Hands-on computer activities utilizing Classroom Suite and Powerpoint will help integrate technology into the emergent reading strategies. (Hands-on activities will be conducted on PC and Macintosh computers.) There is a \$30 materials fee in addition to the cost of the workshop.

*Susan Norwell, M.A., is an Educational Specialist in private practice/Focused Learning Solutions and Instructor, Northeastern Illinois University, Buffalo Grove, IL.*

Monday, October 10, 2011 8:00 am - 4:30 pm

### **PC-12 Switch Access to the Curriculum: How to Make Software Accessible to Switch Users**

Do you struggle with finding curriculum-based switch accessible software? Are you tired of your child/students "playing" the same switch games repeatedly and their data is interpreted as lack of mastery, when it's truly boredom, non-curricular, non-age appropriate? Well, we are, especially when the products exist to make the good, content-supporting software accessible to all users of switches. Come join us as we walk you through the considerations and process of creating a truly accessible computer for all your students. We will take an especially close look at the switch input to products for electronic reading and writing, since those functions provide access to the entire curriculum. On their own, not one of the major tools has switch access built in. How do users of switches independently operate these popular programs for opening and manipulating accessible instructional materials

(AIM)? During the workshop, we'll demonstrate examples of software, hardware and strategies to use throughout the school day and how, together, they can promote inclusion, as well as improve independence in functioning for the full range of your switch-using students. The day is made up of three major sections: the components, the curriculum and planning. We'll have plenty of illustrations and information to use and follow up with afterwards.

*Kelly Fonner, M.S., is an Assistive/Educational Technology Consultant, Lake Geneva, WI and Scott Marfilius, M.S., is an Assistive/Educational Technology Consultant, Milton, WI.*

**Tuesday, October 11, 2011**  
**8:00 am - 4:30 pm**

### **PC-13 In-Depth Exploration of Some of the Most Advanced Assistive Technology iPad Apps**

This workshop, which requires a basic knowledge of and experience with iTunes, iPad/iPod touch/iPhone, will focus on in-depth coverage of key advanced assistive technology solutions for the iPad in the fields of low vision, AAC, story telling, language development, organization/planning and reading/writing. We will cover a handful of apps through short presentations, including case studies, some modeling and in-depth hands-on exploration through a number of step-by-step tutorials. You will, for example, learn how to use and configure the built-in VoiceOver screen reader, how to customize and configure Proloquo2Go for a variety of AAC users, how to use Pictello's advanced features for creating visual stories and how to keep track of progress of students when using ArtikPix to improve their articulation. We will cover several other apps, depending on what's hot at the time of the conference and, last but not least, will cover multiple switch interfaces and switch adapted apps. (Hands-on activities will be conducted on Closing The Gap-provided iPads - one iPad for every two participants.) (Note: This advanced workshop can be taken as a follow up to Monday's Introduction to the iPad and iPod touch as Assistive Technology Solutions, or it can be taken separately.) There is a \$20 fee in addition to the cost of the workshop.

*David Niemeijer, Ph.D., is the CEO, AssistiveWare, Amsterdam, Netherlands; Mark Coppin, B.S., is an Apple Distinguished Educator and the Director of Assistive Technology, Anne Carlsen Center for Children, Jamestown, ND; Eric Sailers, M.A., CCC-SLP, is a Speech Language Pathologist and Assistive Technology Specialist, La Mesa-Spring Valley School District, La Mesa, CA; Jennifer Marden, M.S., M.A., is a Speech Language Pathologist, Technically Speaking, Roslindale, MA; and Cathy Kingeter, M.A., is the Director of Sales and Marketing, Origin Instruments Corp., Grand Prairie, TX.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

### **PC-14 Using Interactive White Boards to Address AAC Language and Literacy in the Classroom**

Come witness six creative ways SLPs and teachers can collaborate using Interactive White Board (IWB) technology to conduct differentiated, group intervention within a classroom setting. Learn how to use the IWB to provide your students with symbol-supported e-books, interactive poems/songs, step-by-step instructions (food prep, arts and crafts, science), dynamic communication pages amenable to aided language stimulation, e-writing activities and interactive academic games. Students won't even realize these fun IWB activities have a "hidden" therapeutic and academic agenda. Numerous "in classroom" videos will be shown to help participants conceptualize the concepts discussed. All materials and strategies are reflective of Universal Design for Learning principles.

*Carol Goossens, Ph.D., is a Speech Language Pathologist and Special Educator currently in private practice in New York City. She is presently working as a*



consultant to the Henry Viscardi School and to Abilities! Dr. Goossens' has presented extensively both nationally and internationally, and has co-authored numerous clinical books regarding her work in the area of Augmentative and Alternative Communication. She is known for her ability to provide successful, classroom-based strategies.

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-15 Facing the Challenges of Access with Students with High Tone and Reflexes, or Low Tone and Weakness, or Mixed Tone and Inconsistent Motor Control**

To support some of our most challenging students, we must better understand their challenges. We must look at the activity, the environment, the student's current postural mechanism and our activity use with AT. The usual historical paradigms of spending inordinate time to "discover" consistent access first, so that learning can begin, will be altered. Instead, we will put into perspective the need of understanding more current neurophysiology, particularly the sensory processing and integration used by students with tone, weakness and/or mixed tone and its subsequent reflexive involvement. We will look at access as a part of an activity and the student's interests and intention regarding activity engagement. We will examine and analyze activity, environment and equipment, and how we introduce AT and its access within these paradigms. This workshop will include sharing case studies, videos and equipment needed and used.

*Karen M. Kangas, OTR/L, ATP, is an Occupational Therapist, AT Specialist, Seating and Mobility Specialist and Clinical Educator in private practice, Karen M. Kangas OTR/L, Shamokin, PA.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-16 Navigating the World of Technology to Enhance Skill Development for Students with Autism Spectrum Disorder**

This beginner workshop will give participants a wealth of information and resources for blending low and high tech strategies, using technology tools to teach students with ASD a broad range of skills, from social relations, communication and academics to life skills. Participants will leave this training with dozens of practical, easy-to-make low tech strategies that can be used immediately to meet the unique learning and behavioral needs of students with ASD and, most importantly, to increase their independent functioning. High tech strategies to be explored include free Web-based tools (Glogster, Animoto, VoiceThread, word cloud tools), interactive white boards, social networking tools and mobile devices, including iPods, iPads, smartpens and smartphones. Numerous evidence-based examples of technology to teach various skills to students with ASD will be shared through a combination of video clips, actual materials and personal stories. Participants will also be provided with access to a wiki created for this workshop. The wiki will provide links to research supporting demonstrated strategies, tutorials for use of the tools, directions for creation of low tech supports and links to Web-based resources. (Participants are strongly encouraged to bring a wireless capable laptop/netbook/smartphone/iPad/iPod touch for interactive participation throughout the day.)

*Susan L. Stokes, M.A., CCC-SLP, is an Educational Autism Consultant and Trainer in private practice, Fond du Lac, WI and Paula Walsler, M.S., CCC-SLP, is the Director of E-Learning/Assistive Technology, CESA 6, Oshkosh, WI.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-17 Technology Integration and UDL Implementation in General Education Classrooms: What's It Take to Make It Happen?**

This intermediate workshop will be of interest to leadership staff, providers of staff development, teachers and assistive technology teams who are ready to move beyond the

provision of technology, one student at a time. For the past two years, the HIAT team has been systematically working with teachers in five schools using the tenets of Universal Design for Learning to focus on technology integration in elementary and middle school, general education classrooms. In each school, "Instructional Technology Leadership Teams" formed the nexus of these efforts. Implementation research that guided our efforts will be described. Driving forces and teacher-driven solutions will be demonstrated through the use of powerful classroom videos. Getting beyond implementation barriers will be discussed. And, because UDL implementation cannot rest with teachers alone, district level efforts will also be addressed. Much has been learned and much will be shared. Participants are encouraged to bring personal laptops to further explore Web-based resources and online collaborative networking tools throughout the day.

*Denise C. DeCoste, Ed.D., is an Assistive Technology Specialist and a High Incidence Accessible Technology Team Leader and William McGrath, M.S., is an Occupational Therapist and Assistive Technology Specialist, both, Montgomery County Public Schools, Bethesda, MD.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-18 Assistive Technology Supports for Struggling Students: Hands-On!**

Participants in this workshop will have a hands-on experience using a full range of off-the-shelf tools, enabling students to function more independently and successfully. Hand-held devices, such as the iPhone, iPad, iPod touch and talking pens, and anything else that is new and cool will be explored. Emphasis will be on the applications that make them tick, from text readers, communication tools to visual assistants, Web conferencing for therapy and Web sites that support learning and more! Throughout this fast-paced show-and-play session, participants will learn by using the most current and emerging technology tools, enabling a wide range of students, including the participant him or herself, to become more efficient at a variety of tasks. From the hardware and software that drive them, to the innovative ideas that open a world of possibilities for use, today's tools for access and success are waiting for you! (Hands-on activities will be conducted on PC and Macintosh computers.)

*Pati King DeBaun, M.S., is a Speech Language Pathologist/Consultant specializing in assistive technology, Creative Communicating, Park City, UT and Dan Herlihy is an Assistive Technology/Technology Resource Specialist, Connective Technology Solutions, Inc., Hoosick, NY.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-19 WRITE ON: From Scribbling to Persuasive Essays - Supporting Conventional Writing!**

This workshop is for those working with students who are beginning to use the alphabet to create meaning, supporting text production from invented spelling and simple sentences to persuasive essays. We will go beyond using symbols/words/phrases, produced traditionally or with technology, to impact writing with the alphabet. We will explore the full writing process, covering prewriting, drafting, revising, editing and publishing, including specific strategies for struggling students at each phase (e.g., using T.I.E. - Topic/Ideas/Ending to develop a paragraph). Multiple student writing samples (pre- and post-) will be shared, and participants will engage in brainstorming activities to customize materials for their students and curriculum. Targeted students are beginning to spell, but struggling to keep up with content-based writing. Participants will receive a CD with light tech and high tech scaffolds, including sample graphic organizers in Word, Classroom Suite, Clicker and Inspiration. There is a \$10 materials fee in addition to the cost of the workshop.

*Caroline Musselwhite, Ed.D., CCC-SLP, is an Assistive Technology Consultant and Author, AAC Intervention,*

*Litchfield Park, AZ; Jerolyn Allen, M.Ed., OTR/L, ATACP, is an Occupational Therapist and Assistive Technology Coordinator, Litchfield Elementary School District, Litchfield Park, AZ; Laurel Richardson Buell, M.S., OTR, is an Occupational Therapist/AT Specialist, Assistive Technology Services, Mesa, AZ; Kim James, M.Ed., is a Special Educator/Cross-Categorical Multi-Age Middle School Teacher, Litchfield Elementary School District, Litchfield Park, AZ; Deanna K. Wagner, M.S., CCC-CLP, is an Assistive Technology Specialist, Madison Elementary School District, Phoenix, AZ; and Patty Ashby, M.N.S. in Speech Language Pathology, is an Assistive Technology Consultant, Southwest Human Development/Washington School District, Phoenix, AZ.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-20 USING PDFs in Special Education**

This intermediate to advanced hands-on workshop is designed to deal with the use of teacher- or publisher-created PDF files in special education for reading, note-taking and worksheet/test tasks. Throughout the day, we'll work with using PDFs on the computer, iPhone and iPod, iPad and Kindle. You'll learn how to transfer PDFs to these devices, which apps you need on portable devices and what tasks can and can't be done on mobile devices versus the computer. We'll look at student use of PDFs, stressing changing settings to meet student needs, and teaching students and their parents how to use PDF files for reading and/or for worksheets and tests. We'll also look at teacher use of PDFs, primarily for creating student portfolios and organizing forms and records. Finally, participants in this hands-on workshop will learn about other programs that directly use PDFs and how to change PDFs into different file types. Participants who have an iPhone, iPod touch or iPad should bring them, having the Good Reader app already installed. (Hands-on activities will be conducted on Closing The Gap-provided Mac computers - one computer for every two participants; OR, participants are welcome to bring their own laptop computer [Mac or PC] with Adobe Acrobat Professional version 10 pre-installed.) (Note: Although this workshop serves as a continuum of Monday's Creating PDFs workshop, it can be taken separately.)

*Judith P. Sweeney, M.A. Special Education, is an AT Consultant and the President, Onion Mountain Technology, Inc., Canton, CT.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

**PC-21 Every Move Counts, Clicks and Chats - IMPLEMENTATION Strategies: Where Do You Go After Assessment?**

Selecting instructional strategies that lead to student success is often challenging for those who live and work with individuals having severe and profound sensory/motor differences. This workshop is appropriate for all professional skill levels and will build on the Assessment workshop, providing strategies for incorporating information gathered during assessment into implementation and development of appropriate programs for students with the most significant sensory/motor differences. It will address ways to design an effective individualized communication program that builds on the abilities identified through the Every Move Counts, Clicks and Chats assessment protocols. It will address the relationship of switch use, symbol understanding, low tech communication and assistive technology (including speech generating devices), and will teach participants to recognize five levels of sequential strategies that support the development of communication and purposeful switch use, to effectively integrate communication training into daily activities by providing appropriate choice-making opportunities and to progress through a hierarchy of alternate and augmentative communication systems, in order to identify and provide the communication system (no tech through high tech) that best meets an individual's needs and abilities. (Note: Although not mandatory, it is strongly

recommended that the Every Move Counts Assessment workshop [on Monday] be taken first to better understand and apply that which will be taught in this Implementation workshop. The manual is included in the cost of Monday's Assessment workshop.)

*Jane Korsten, M.A., is a Speech Language Pathologist, AT Resource Specialist and Co-Author of Every Move Counts, EMC Communication Inc., Leawood, KS and Terry Foss, M.Ed., is an AT Resource Specialist and Co-Author of Every Move Counts, EMC Communication Inc., Lee's Summit, MO.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

### **PC-22 Teaching Non-Verbal Children to Read: The Link Between Reading and Communication**

This exciting workshop will focus on teaching non-verbal children with severe disabilities to read and write, utilizing a Balanced Approach to reading, while stressing the efficacy of literacy as an instructional tool for language development. Hands-on experiences with computer technology that supports reading instruction will be explicitly integrated into the learning. Often, technology is seen as an "add-on" to the instructional sequence; but in this workshop, it will be integrated so participants can better grasp the need for an integrated use of technology in instruction. The needs of the student who is non-verbal or "less than verbal" will be highlighted. Participants will learn to understand that these needs dictate how to "tweak" a Balanced Literacy Approach to work for a particular child. Extensive videos illustrate key points and techniques in the instruction of decoding, guided reading and comprehension. Writing and self-selected reading will be explored as various technologies are utilized for the child who is unable to hold a pencil or even a book independently. The integration of augmentative communication and technology as a platform for giving children with disabilities a research-based approach to reading, similar to the more typical peers, is the

focus. Participants should have an intermediate computer skill level and a desire to learn Classroom Suite. (Hands-on activities will be conducted on PC and Macintosh computers.) There is a \$30 materials fee in addition to the cost of the workshop.

*Susan Norwell, M.A., is an Educational Specialist in private practice/Focused Learning Solutions and Instructor, Northeastern Illinois University, Buffalo Grove, IL.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

### **PC-23 Put Me in Coach! Coaching Strategies for AT Integration**

This intermediate workshop will focus on the specific support strategy of coaching educators and how it can be applied to help develop more integrated AT services. Effective assistive technology supports involve a variety of strategies, including direct service to students, consultation to families and educators and collaboration with team members. However, coaching emerges from the literature as the most effective support strategy to accomplish this goal. This workshop will teach three aspects of effective educational coaching for AT. They are questioning and dialogue skills, active listening and the provision of feedback that empowers. The workshop will address each of these skill areas, providing information, self-assessments and practice. Participants will develop a specific AT Question Recipe, complete a listening skills self-assessment and practice providing reflective feedback that includes value statements, clarification and possibilities. We'll coach each other as we learn more effective ways to provide support.

*Gayl Bowser, M.S. Ed., is an Independent Consultant, Roseburg, OR.*

Tuesday, October 11, 2011 8:00 am - 4:30 pm

### **PC-24 AAC Evaluation - The Beginning of Successful AAC Outcomes: Best Practices and Tools for AAC Assessment**

The ultimate outcome or goal of AAC assessment is effective use of communication. With the complexity of AAC evaluation, the diversity of those needing assessment and the overwhelming choices of devices, AAC apps and possible systems, the need for a systematic, comprehensive approach to assessment is critical to the goal of successful AAC use. But how do you get there when there are few systematic assessment protocols available? This workshop will look at organizing the tools, knowledge and procedures to maximize resources and outcomes. An overview of the major components of the AAC evaluation process, as well as the information that must be obtained for each area, will be provided. Currently published AAC evaluation tools will be examined, procedures and strategies for gathering pertinent information efficiently will be reviewed and budget-conscious devices and tools that are fundamental to testing various functions of communication will be identified. A free assessment protocol will be examined in depth. All participants will receive a CD that contains forms for use throughout the evaluation process, a summary of essential items for a basic AAC evaluation toolkit, the AAC Evaluation Genie assessment protocol and a detailed video explaining the rationale and administration of the different subtests, and many more new and tried-and-true resources and strategies.

*Elizabeth (Libby) S. Rush, M.A., CCC-SLP, CPM, is an AAC Consultant in private practice, Durham, NC and Celeste Helling, M.A., CCC-SLP, ATP, is a Speech Language Pathologist, North Carolina Assistive Technology Program, Charlotte, NC.*

## **STATE-OF-THE-ART COMMERCIAL EXHIBITS**

Tuesday evening through Friday, October 11-14, 2011

### **ASK QUESTIONS, GET ANSWERS – Companies exhibiting at Closing The Gap**

represent an impressive and varied scope of AT products and strategies from around the world, including knowledgeable reps and professionals with substantial experience in the field to best explain and demonstrate their solutions. Below are the contracted companies to date.

#### **AAC Institute**

[www.aac institute.org](http://www.aac institute.org)

We are a not-for-profit, charitable organization dedicated to the most effective communication for people who rely on augmentative and alternative communication (AAC).

#### **AAC TechConnect, Inc.**

[www.aac TechConnect.com](http://www.aac TechConnect.com)

A company that simplifies augmentative communication (AAC) evaluations by providing national workshops, online clinical/evaluation toolkits and is a one-stop Web resource center for AAC info.

#### **AbleNet**

[www.ablenetinc.com](http://www.ablenetinc.com)

AbleNet offers communication aids, SoundingBoard AAC App, switches, environmental controls, computer access, software, mounting devices, low vision aids, data management and special education curricula.

#### **Adaptation, Inc.**

[www.adaptation.com](http://www.adaptation.com)

Adaptation manufactures lite tech communication aids, switches and environmental controls.

#### **Adaptive Solutions**

[www.adaptive-sol.com](http://www.adaptive-sol.com)

Adaptive Solutions is the developer and distributor of Assistive Technology Tracker Web, an online database that enables an agency to track services provided and includes equipment check in/out.

#### **Adaptive Switch Laboratories**

[www.asl-inc.com](http://www.asl-inc.com)

ASL is dedicated to designing and adapting devices that allow individuals with severe disabilities to achieve independent movement, environmental control and communication/computer access.

#### **Aimee Solutions**

[www.aimeesolutions.com](http://www.aimeesolutions.com)

Ready to use theme based language materials and communication supports for home, school and community. Check out our new click to read series!

#### **Alexicom Tech**

[www.alexicomtech.com](http://www.alexicomtech.com)

Alexicom Tech is the world's first Internet-based AAC system. The service works on Smartphones, Tablet PCs, iPod, iPhone, Smartboards, PC and Mac, online and offline.

#### **AMD**

[www.amdi.net](http://www.amdi.net)

Amdi makers of the Tech/Series communicators now offering a durable housing for the iPad called the iAdapter with amplified speaker shoulder strap and other accessories.

#### **AssistiveWare**

[www.assistiveware.com](http://www.assistiveware.com)

AssistiveWare is the worldwide leader in innovative assistive technology software for Mac OS X and iOS with applications such as Proloquo2Go, Pictello, KeyStorke and SwitchXS.

#### **Atomic Learning**

[www.atomiclearning.com](http://www.atomiclearning.com)

Atomic Learning's Assistive Technology Collection provides hundreds of easy-to-understand tutorials focused on helping educators use and apply assistive technology -including training on accessibility features.

#### **Attainment Company**

[www.attainmentcompany.com](http://www.attainmentcompany.com)

Attainment Company products are created for individuals with intellectual and/or communicative disabilities. Our goal: Increase learning and to foster active participation in classroom and communities.

**Augmentative Resources, Inc.**  
[www.augresources.com](http://www.augresources.com)

AAC Communication Books, Choice Boards, Picture Schedules and Interactive Language Books. New!- Communication Charm Bracelets, Easy-Push Talking Pockets and Time-a-Task Schedules.

**BlueSky Designs, Inc.**  
[www.mountmover.com](http://www.mountmover.com)

Mount'n Mover: a flexible, accessible and movable mount for laptops, communications aids, cameras, trays and more. Easily set memory lock positions, height and tilt angle.

**Bookshare**  
[www.bookshare.org](http://www.bookshare.org)

Bookshare is the world's largest online library of accessible digital books for people with print disabilities. Our services are free for U.S. students of any age.

**Cadan Computers dba Technology for Education**  
[www.tfeinc.com](http://www.tfeinc.com)

Echo Smark Pen, Products for Deaf/HOH, B-Calm for autism, Orbitrack, Proxtalker, Leap Frog, Smartcat, Interact, Visi Print for individuals with visual impairments.

**Cambium Learning Technologies**  
[www.cambiumtech.com](http://www.cambiumtech.com)

The leading educational software company focused on creating instructional products that serve the needs of at risk and special student populations.

**CJT Mounting**  
[www.yescjt.com](http://www.yescjt.com)

CJT provides modular mounting systems and other adaptive equipment to position, support and transport assistive technology devices. Come see our new products for 2011.

**Closing The Gap**  
[www.closingthegap.com](http://www.closingthegap.com)

Try, first-hand, the online subscription tool that allows users to search for and compare the latest in AT products and allows users to find, read and share articles that highlight effective AT strategies.

**Cognitopia Software**  
[www.cognitopia.com](http://www.cognitopia.com)

Cognitopia Software presents Picture Planner, an affordable icon-based personal organizer using customizable pictures and symbols. Compatible with iPad and iPod touch.

**Conover Company**  
[www.conovercompany.com](http://www.conovercompany.com)

The Conover Company provides computer software-based assessments and curriculum for transition, social/emotional learning, and independent living skills utilizing the iPad and iPod touch.

**Creative Communicating**  
[www.creativecommunicating.com](http://www.creativecommunicating.com)

Creative Communicating is dedicated to creating fun, simple and universally accessible resources for communication, early literacy and creativity for students with disabilities.

**Crick Software, Inc.**  
[www.cricksoft.com](http://www.cricksoft.com)

Our mission is to improve literacy achievement for students of all abilities by providing educators with innovative solutions that are easy to use and cost-effective.

**Daedalus Technologies**  
[www.daessy.com](http://www.daessy.com)

Daessy Mounting Systems by Daedalus Technologies. The leader in support systems for AAC devices and computers. All new products on display, making technology more accessible.

**DO-IT**  
[www.uw.edu/doi/](http://www.uw.edu/doi/)

DO-IT serves to increase the participation of individuals with disabilities in challenging academic programs and careers, through the use of technology, mentoring, training and advocacy.

**Don Johnston, Inc.**  
[www.donjohonston.com](http://www.donjohonston.com)

Award-winning products build in physical accessibility, integrate validated research, capitalize brain science, align to standards and are presented in multiple medias through engaging instructional models.

**DynaVox Mayer-Johnson**  
[www.dynavoxtech.com](http://www.dynavoxtech.com)

DynaVox Mayer-Johnson offers solutions for children and adults with complex communication and learning challenges, including the Maestro and Xpress communication devices and Boardmaker Studio software.

**Fraser**  
[www.fraser.org](http://www.fraser.org)

Fraser serves children and adults with special needs through education, healthcare and housing. Fraser is also Minnesota's largest and most experienced provider of autism services.

**FRS Custom Solutions**  
[www.frs-solutions.com](http://www.frs-solutions.com)

FRS Custom Solutions/Forbes Rehab Services has 24 years experience designing, manufacturing and distributing AAC products. Our products are truly "Better by Design".

**HumanWare**  
[www.humanware.com](http://www.humanware.com)

HumanWare provides innovative solutions, empowering people who are blind, deaf-blind, visually impaired or learning disabled

**Inclusive TLC Special Needs**  
[www.inclusivetlc.com](http://www.inclusivetlc.com)

Specialists in the best special needs software, switches and computer access devices, as well as communication aids and the latest assistive technology.

**InfoCor**  
[www.infocor.com](http://www.infocor.com)

InfoCor is a premier audiovisual integrator and manufacturer of the satalight interactive whiteboard and satalight HD interactive flat-panel touch screen products for the Assistive Technology marketplace.

**Judy Lynn Software, Inc.**  
[www.judylynn.com](http://www.judylynn.com)

Captivating switch and touch window software for students functioning at nine months and up. Stop by for a free catalog and demo.

**Laureate Learning Systems, Inc.**  
[www.laureatelearning.com](http://www.laureatelearning.com)

Research-based, award-winning software for language assessment and intervention, communication, auditory processing and reading designed to meet the unique needs of individuals with disabilities.

**Lightspeed Technologies, Inc.**  
[www.lightspeed-tek.com](http://www.lightspeed-tek.com)

Your voice. Their mind. A clear connection. Established in 1990, Lightspeed is the trusted provider in classroom audio.

**Marblesoft - Simtech**  
[www.marblesoft.com](http://www.marblesoft.com)

For over 28 years, Marblesoft-Simtech has produced outstanding social needs software for infants through adults. Stop by our booth to see what's new!

**ModularHose.com**  
[www.modularhose.com](http://www.modularhose.com)

Loc-Line Modular Hose is a unique plastic hose system that is flexible but yet self-supporting and re-positionable. Great for holding switches and utensils.

**N2Y, Inc.**  
[www.n2y.com](http://www.n2y.com)

Channel current events with News-2-You, our weekly Internet newspaper. Acquire a standards-based special education curriculum with Unique Learning System. Communicate with our dynamic symbol set, SymbolStix.

**Nasco**  
[www.enasco.com](http://www.enasco.com)

Nasco's special education catalog offers a full line of products and resources for the special education teacher K-12, including software and assistive technology.

**Origin Instruments Corp.**  
[www.orin.com](http://www.orin.com)

Origin Instruments delivers hardware and software solutions for computer access, switch-based access, speech and low vision. The HeadMouse Extreme is the company's flagship product.

**PRC**  
[www.prentrom.com](http://www.prentrom.com)

Easy, yet powerful communication devices by PRC. Come see how easy it is to speak with ECO2, ECOpoint, Vantage Lite, SpringBoard Lite and Vanguard.

**Proxtalker.com, LLC**  
[www.proxtalker.com](http://www.proxtalker.com)

The first moveable picture communication device that actually talks. Encoded picture sound tags produce voice output when pressed. Tags can be customized with any image and sound.

**Read Naturally, Inc.**  
[www.readnaturally.com](http://www.readnaturally.com)

Read Naturally's innovative, research-proven reading programs provide high quality interventions and differentiated instruction for struggling readers. The programs focus on fluency, phonics, vocabulary, and assessment.

**RJ Cooper & Associates**  
[www.rjcooper.com](http://www.rjcooper.com)

One of the first software and hardware developers for our field.

**Saltillo Corporation**  
[www.saltillo.com](http://www.saltillo.com)

Saltillo Corporation manufactures and distributes portable augmentative communication for individuals who cannot speak. Saltillo's portable devices include Touchat, an iPad application.

**Sensory Software International Ltd.**  
[www.sensorysoftware.com](http://www.sensorysoftware.com)

Pioneers of computer-based communication aids and developers of innovative computer software for communication and computer access. Our main title is The Grid 2, which provides a full range of AAC options.

**Slater Software, Inc.**  
[www.slatersoftware.com](http://www.slatersoftware.com)

Slater Software utilizes the Picture-Assisted Literacy (PAL) approach to teaching literacy. Picture It, PixWriter, Simply Science and Read and Tell lead a full line of PAL Products.

**SoftTouch, Inc.**  
[www.softtouch.com](http://www.softtouch.com)

SoftTouch has been developing accessible software for over 20 years. SoftTouch provides self-authoring tools, cause-and-effect software, and curriculum-based products.

**Switch In Time**  
[www.switchintime.com](http://www.switchintime.com)

Switch In Time offers engaging games and music software for individuals of all ages and abilities.

**Talking with Baby**  
[www.talkingwithbaby.com](http://www.talkingwithbaby.com)

Mom's Choice Award, February 2010, Educational Products. Baby's first textbook. Learn, teach American Sign Language introducing literacy. Words in context to daily activities, involves parents.

**Texthelp Systems, Inc.**  
[www.texthelp.com](http://www.texthelp.com)

Texthelp provides literacy software including Read&Write GOLD, reading/writing/research support toolbar that integrates with mainstream applications; and Fluency Tutor, online solution for developing/assessing oral reading fluency.

**Tobii ATI**  
[www.tobiiati.com](http://www.tobiiati.com)

Tobii ATI is a premier developer of speech generating devices, eye tracking devices, and software for people with physical, cognitive and speech disabilities.

**Vizzle by Monarch Teaching Technologies, Inc.**  
[www.monarchtt.com](http://www.monarchtt.com)

Award-winning Web-based software for fun, interactive, visually supported special education/autism instruction. Customize peer-reviewed premade lessons or create your own and track improvement by IEP goals

**Widgit**  
[www.widgit.com](http://www.widgit.com)

Widgit are inclusion and accessibility experts. Widgit Symbols enable all-aged individuals to access written information and communicate more independently, through Widgit's software, resources and services.

**Words+, Inc.**  
[www.words-plus.com](http://www.words-plus.com)

Words+ has been busy developing new products to unlock the person. It's our mission to help expand the lives of people with unique communication needs.

**Writer Learning Systems**  
[www.writerlearning.com](http://www.writerlearning.com)

From simple note taking to advanced writing and communication support, the Fusion and Writer are designed to assist a wide range of ages and abilities.

**Conference - Wednesday, Thursday, Friday, October 12-14, 2011** Includes Preview of Exhibits – Tuesday, October 11, 5:30 pm - 8:00 pm

Registration Received	On or Before June 30	July 1 - September 8	September 9 - September 29	September 30 - Onsite
<b>Standard Rate</b> Group Discount - 5 or more Group Discount - 8 or more <i>All group registrations must be received at the same time.</i>	<b>\$415</b> Groups 5+ Deduct \$30 Groups 8+ Deduct \$50	<b>\$455</b> Groups 5+ Deduct \$30 Groups 8+ Deduct \$50	<b>\$495</b> Groups 5+ Deduct \$30 Groups 8+ Deduct \$50	<b>\$525</b> Groups 5+ Deduct \$30 Groups 8+ Deduct \$50
<b>Parent Rate</b> (A letter describing your child's disability must accompany registration)				<b>\$275</b>
<b>Full-time Student Rate</b> (Proof of full-time student status must accompany registration)				<b>\$325</b>
<b>Presenter Rate</b> (Presentation title: _____)				<b>\$325</b>
<b>Exhibitor Rate</b> (Company name and booth number: _____)				<b>\$325</b>

Single Day and Exhibit Hall Only Registration	Price
<b>Thursday Only - October 13</b>	<b>\$275</b>
<b>Friday Only - October 14</b>	<b>\$125</b>
<b>Exhibit Hall Only - Tuesday evening through Friday, October 11-14</b>	<b>\$175</b>

Preconference Workshops - Monday and Tuesday, October 10-11, 2011 (Includes Preview of Exhibits – Tuesday, October 11, 5:30 pm - 8:00 pm)	Price
<b>Monday, October 10</b> (Some preconference workshops carry an additional fee for materials)	<b>\$275</b>
<b>Tuesday, October 11</b> (Some preconference workshops carry an additional fee for materials)	<b>\$275</b>
<b>BUNDLED PRICING! Monday and Tuesday Bundle (\$60 savings)</b>	<b>\$490</b>

**\$30 RETURN DISCOUNT** A \$30 "return" discount is available to **ANY** past conference registrant and must be used by June 30, 2011. 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.

**CONFIRMATION**

All who register by October 1, 2011 will receive confirmation by mail.

**CONFERENCE DIRECTORY**

The official Closing The Gap Conference Directory will be given to registrants at the conference site; many of the conference details will be posted on Closing The Gap's Web site.

**CANCELLATION POLICY**

Cancellations must be received in writing by Closing The Gap on or before October 1, 2011. There will be a \$75 cancellation fee for each one-day preconference workshop, each one-day conference registration, or each exhibit hall only registration; a \$125 cancellation fee for each three-day conference registration. Replacements are welcome and must be submitted in writing.

No refunds after October 1, 2011. Unpaid balances are due in full.

**SCHOLARSHIPS**

A limited number of scholarships are available for persons with disabilities or parents/guardians of children with disabilities. These scholarships cover registration fees for the conference only (Wednesday - Friday), and do not cover preconference workshops, food, lodging or travel. Scholarships are awarded on a first come, first served basis and one time only per person. Persons that have previously received a scholarship from Closing The Gap are not eligible.

To apply, complete a conference registration form, indicating your scholarship request. Submit the form and attach a letter describing your/your child's disability and telling us why you would like to attend the conference.

Applicants will receive written notification of acceptance or denial.

**CONFERENCE HEADQUARTERS**

Sheraton Bloomington Hotel (soon to be a Double Tree hotel), 7800 Normandale Blvd., Bloomington, Minnesota is the official hotel of the conference. All conference activities are held at this hotel located just 10 minutes west of the Minneapolis-St. Paul International Airport. Limo, taxi, and mobility assistance services are available. Hotel-airport shuttles are available for Sheraton Bloomington Hotel.

**TRAVEL**

Minneapolis-St. Paul International Airport (MSP) has one airfield and two terminal buildings - Terminal 1-Lindbergh and Terminal 2-Humphrey. Twelve commercial passenger airlines service the airport.

Conference goers are encouraged to choose the airline that best meets their needs and budget.

For detailed airport information, please visit [www.mspairport.com/](http://www.mspairport.com/)

For those interested in flying Delta, Closing The Gap has arranged for them to offer discounted conference rates. For the lowest possible air fares, in the United States and Canada, call Delta at 800-328-1111, Monday through Friday, 7:30 am - 7:30 pm Central Daylight Time and reference the **Closing The Gap Conference, I.D. code NM7AH.**

**ACCESSIBLE TRANSPORTATION**

To arrange for accessible transportation while visiting the Minneapolis area, have your ADA certifying agency fax your certification information along with the address where you will be staying and dates you plan on being in Minneapolis to 651-602-1660 four weeks prior to your arrival date. Riders must be ADA certified in the state in which they live. For questions regarding certification, call Jim Nieman at 651-602-1665. If you are not ADA certified, call Airport Taxi at 612-331-8294 (special assistance provided if requested).

**HOTEL RESERVATIONS**

Hotel reservations can be made by contacting the conference affiliated hotels directly. Please refer to the "Closing The Gap Conference" when making your reservations to receive conference room discounts when and where applicable. Both hotels have a limited number of handicapped accessible rooms. If you require an accessible room, state your needs when making your reservations and reserve your room early to better insure a room that will best accommodate you.

A deposit of one night's room rate plus tax is required to reserve a guest room for the Closing The Gap Conference.

**Sheraton Bloomington Hotel**  
(Soon to be a DoubleTree Hotel)

7800 Normandale Blvd.  
Bloomington, MN 55439  
**Phone:** 952-835-7800; **Fax:** 952-893-8419

**\$149** - single occupancy    **\$169** - triple occupancy  
**\$159** - double occupancy    **\$179** - quad occupancy  
(All are in South Tower.)  
(Plus applicable state and local taxes.)

**Hotel Sofitel** (a one-block walk from the Sheraton)

5601 W. 78th St.  
Bloomington, MN 55439  
**Phone:** 952-835-1900 **Fax:** 952-835-0545

**\$159** - single, double, triple or quad occupancy  
(Plus applicable state and local taxes.)

Cancellation policy for both hotels: Guest rooms may be cancelled up to October 1, 2011, with no cancellation penalty and your total deposit refunded to you. Any guest room cancelled after October 1, 2011, will be subject to forfeiture of the entire deposit.

# 2011 CLOSING THE GAP CONFERENCE REGISTRATION FORM

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Mailing Address (home/work - please circle one) \_\_\_\_\_

City \_\_\_\_\_ State / Country \_\_\_\_\_ Zip Code / Postal Code \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Fax \_\_\_\_\_ E-mail \_\_\_\_\_

Employer \_\_\_\_\_ Occupation \_\_\_\_\_

Is this your first time attending?  Yes  No If no, most recent year attended \_\_\_\_\_ How did you hear about the conference? \_\_\_\_\_

\*SPECIAL SERVICES  MS DOS text file  Macintosh text file (Text file will be e-mailed.)  Sign interpreter

\*For persons with disabilities only - must be requested by September 1, 2011.

Conference - Wednesday, Thursday, Friday, October 12-14, 2011 Includes Preview of Exhibits - Tuesday, October 11, 5:30 pm - 8:00 pm				
Registration Received	On or Before June 30	July 1 - September 8	September 9 - September 29	September 30 - Onsite
<input type="checkbox"/> Standard Rate	<b>\$415</b>	<b>\$455</b>	<b>\$495</b>	<b>\$525</b>
<input type="checkbox"/> Group Discount - 5 or more	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30
<input type="checkbox"/> Group Discount - 8 or more <i>All group registrations must be received at the same time.</i>	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50
<input type="checkbox"/> Parent Rate (A letter describing your child's disability must accompany registration)				<b>\$275</b>
<input type="checkbox"/> Full-time Student Rate (Proof of full-time student status must accompany registration)				<b>\$325</b>
<input type="checkbox"/> Presenter Rate (Presentation title: _____)				<b>\$325</b>
<input type="checkbox"/> Exhibitor Rate (Company name and booth number: _____)				<b>\$325</b>

\$ \_\_\_\_\_

Single-Day and Exhibit Hall Only Registration	Price
<input type="checkbox"/> Thursday Only - October 13	<b>\$275</b>
<input type="checkbox"/> Friday Only - October 14	<b>\$125</b>
<input type="checkbox"/> Exhibit Hall Only - Tuesday evening through Friday, October 11-14	<b>\$175</b>

\$ \_\_\_\_\_

CONFERENCE SCHOLARSHIP (See page 44 for complete information.)
<input type="checkbox"/> I am applying for a conference scholarship. A letter describing your/your child's disability and telling us why you would like to attend the conference must be included.

\$ \$0.00

Preconference Workshops - Monday and Tuesday, October 10-11, 2011 (Includes Preview of Exhibits - Tuesday, October 11, 5:30 pm - 8:00 pm)	Price
<input type="checkbox"/> PC-1 Two-day PODD Workshop, Tuesday and Wednesday, October 10-11	<b>\$490</b>
<input type="checkbox"/> Monday, October 10 1 <sup>st</sup> Choice PC- _____ 2 <sup>nd</sup> Choice PC- _____	<b>\$275</b>
<input type="checkbox"/> Tuesday, October 11 1 <sup>st</sup> Choice PC- _____ 2 <sup>nd</sup> Choice PC- _____	<b>\$275</b>
<input type="checkbox"/> BUNDLED PRICING! Monday and Tuesday Bundle (\$60 savings)	<b>\$490</b>
I will bring my own computer for: <input type="checkbox"/> PC-9 <input type="checkbox"/> PC-20 <input type="checkbox"/> I will use Closing The Gap's computer. Participants in PC-8 <b>MUST</b> bring their own computer.	
<input type="checkbox"/> MATERIAL FEE(S), IF APPLICABLE (The materials fee equals the cost of the materials provided.)	
PC-1 - \$15 materials fee	PC-10- \$75 materials fee
PC-2 - \$20 materials fee	PC-11 - \$30 materials fee
	PC-13 - \$20 materials fee
	PC-19 - \$10 materials fee
	PC-22 - \$30 materials fee

\$ \_\_\_\_\_

\$ \_\_\_\_\_

**ACADEMIC CREDIT** (See page 38 for complete information and requirements.)

One Semester Credit **\$128**  Two Semester Credits **\$256**  Three Semester Credits **\$384**

\$ \_\_\_\_\_

**SUBSCRIPTION - AN ADDITIONAL NON-CONFERENCE OPTION** (See Web site for more information.)

One-year ONLINE subscription - **\$50**  One-year PRINT subscription - **\$39** (In the US)  Combination Subscription  
 One-year ONLINE student subscription - **\$40** **\$55** (To Canada) One-year PRINT and ONLINE subscription - **\$80**  
 US and Canada only

\$ \_\_\_\_\_

(\$ \_\_\_\_\_) **RETURN DISCOUNT - \$30** (Not applicable after June 30, 2011)

\$ \_\_\_\_\_ **TOTAL AMOUNT** (Payment or purchase order must accompany registration.)

**PAYMENT INFORMATION** My check # \_\_\_\_\_ for \$ \_\_\_\_\_ is enclosed.

Please Charge to my  Visa  MasterCard Card Number \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Exp Date: \_\_\_\_\_ Cardholder Address: \_\_\_\_\_

Please bill my agency or school district PO # \_\_\_\_\_ (Purchase order must accompany registration.)

**Mail or fax form with payment or purchase order to:** Closing The Gap, P.O. Box 68, Henderson, MN 56044; Fax 507-248-3810. **Or register online at:** <www.closingthegap.com>. All who register by October 1, 2011 will receive confirmation by mail. The official Closing The Gap Conference Directory will be given to registrants at the conference site; many of the conference details will be posted on Closing The Gap's Web site. For additional information call 507-248-3294 or e-mail <info@closingthegap.com>.

**Cancellations** must be received in writing by Closing The Gap on or before October 1, 2011. \$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, 2011. Unpaid balances are due in full. Replacements are welcome and must be submitted in writing.

Register Now!

Closing The Gap

# WEBINARS

• Presented by some of the leading, most sought-after experts in the field of assistive technology.

• Events developed around your current and pressing assistive technology needs!

## iDevices - The Next Level

PRESENTER - MARK COPPIN, ASSISTIVE TECHNOLOGY DIRECTOR

**Thursday, April 14, 2011**

**1:00 pm - 2:30 pm** Central Daylight Time

**AND**

**Thursday, April 21, 2011**

**3:00 pm - 4:30 pm** Central Daylight Time

*In this 90-minute Webinar, we will explore some of the advanced features of your iPod touch, iPhone and more specifically your iPad. During this session we explore:*

- Accessibility features
- App and folder management
- Advanced Setting
- Restrictions and Security
- App settings
- Multitasking
- Setting up Printing
- Backing up and restore
- Battery Management

*Plus we will share several tips and tricks to help you better utilize your devices. We will also cover several resources where you can find more information on how to use these devices as assistive technology.*

**\$55 single-participant fee** (No cancellations, no refunds.)

*Group participation available for additional fee. Visit Web site for complete pricing and details.*

**Register Now!**

*Space is limited*

### UPCOMING WEBINARS

Closing The Gap will add to the breadth and scope of the Webinars and will showcase the knowledge, skills and insights of many experts in the field.

Visit our Web site regularly to learn more about upcoming events.

Share your thoughts, ideas and suggestions by contacting Closing The Gap as well!

### CONTACT US

Closing The Gap  
526 Main Street  
P.O. Box 68  
Henderson, MN 56044  
Phone: 507-248-3294  
Fax: 507-248-3810

[www.closingthegap.com/store/webinars/](http://www.closingthegap.com/store/webinars/)





# Start your Solutions subscription today!

**Receive 6 issues, including the 2012 Closing The Gap Resource Directory**

(February / March issue)

The Resource Directory is a guide to over 2,000 of the latest assistive technology products available for children and adults with disabilities!

## Choose from PRINT, ONLINE or the value-priced COMBINATION subscription

### PRINT SUBSCRIPTION

#### In the United States

One year (six issues) \$39

#### Canada – Airmail

One year (six issues) \$55 (U.S. Funds)

### ONLINE SUBSCRIPTION

#### 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.)

**Site License** (Groups of 10 or more can save from 25-70 percent with site license pricing. Visit [www.closingthegap.com](http://www.closingthegap.com) to learn more!)

### COMBINATION SUBSCRIPTION

Combination, One-year Print and Online Subscription \$80 (U.S. and Canada)

## 2011 Resource Directories

Resource Directories \_\_\_\_\_  
\$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 or more	\$9.50

## FREE shipping and handling

if check in full payment accompanies an order for 10 or more directories (shipped within the United States only).

Shipping and handling charges will be added to all invoices and credit card payments.

## YES, I WANT TO ORDER!

Please complete the following:

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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: \_\_\_\_\_

\_\_\_\_\_ Exp. date \_\_\_\_\_

Cardholder signature: \_\_\_\_\_

Cardholder address: \_\_\_\_\_

Purchase order attached #: \_\_\_\_\_

(Allow 8 - 10 weeks for delivery of your first issue.)

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GoTalk 9+



GoTalk 20+



GoTalk Pocket



GoTalk 32+



new!



## GoTalk Express 32

Plays messages in sequence

Surround LEDs

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### All GoTalks

- Affordable
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- 2 year warranty
- Easy to use
- Great sound
- Great service

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new!



Who thought you could do so much with a single button?

Ten levels plus three activities with ten steps each.

*with easy-touch access!*



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1-800-327-4269

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