

*Assistive Technology Resources for Children and Adults with Disabilities*

# Closing The Gap

AUGUST / SEPTEMBER, 2011  
VOLUME 30 - NUMBER 3

*Solutions*

## **ACROBAT X PRO**

**A Vital Addition to your  
assistive technology toolbox**

**PROVIDING IMMEDIATE  
WRITING ACCOMMODATIONS:  
Using the Spoken Word**

**TRACKING THE  
EFFECTIVENESS OF DO-IT  
INTERVENTIONS  
New Longitudinal Data on  
Students with Disabilities**

**AAC MEETS ABA:  
Natural Aided Language  
Interventions for Individuals  
with Autism and Complex  
Communication Needs**

## **THE LOGAN BRAILLECOACH**

## **APPS FOR OLDER ADULTS**

**SMART INCLUSION:  
Adventures in the Classroom**

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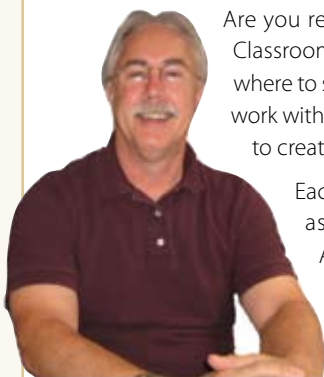
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# Closing The Gap WEBINARS

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## Creating Your Own Activities with Classroom Suite 4 90 MINUTES



Are you ready to start creating advanced activities in Classroom Suite 4? Do you have ideas but don't know where to start? This series of sessions will explore how to work with actions and components in Classroom Suite 4 to create custom activities.

Each session will explore specific aspects, such as Creating Toolbars for Customized Writing Activities, Beyond Check Work – Feedback and Tracking Besides Right or Wrong, Creating Interactive Graphing Activities and more – requests will be considered. Each session will be a mix of demonstration and discussion, brief hands-on periods, troubleshooting and discussion. Handouts and templates will be provided for each session.

### SESSION #1 -

#### Creating Toolbars, Buttons and Prompts for Customized Writing Activities

★ **MONDAY, AUGUST 29, 2011**  
1:00 pm - 2:30 pm Central Daylight Time

## The iPod Touch and iPad as Assistive Technology 90 MINUTES

In this 90-minute Webinar, we will explore some of the ways that the iPod touch/iPad are being used as assistive technology devices. We will cover the benefits and limitations of each device, as well as their differences. We will also discuss some of the built-in accessibility features of the devices. We will then provide participants with demonstrations of various apps and discuss how they are being used. The participants will be provided with information on various apps, resources and third party accessories.

**Registration fee \$55** (No cancellations, no refunds)

★ **THURSDAY, SEPTEMBER 29, 2011**  
10:00 am - 11:30 am Central Daylight Time



**MARK COPPIN**, B.S., is an Apple Distinguished Educator and the Director of Assistive Technology, Anne Carlsen Center for Children, Jamestown, ND.

Basic skills using Classroom Suite 4 are required. These sessions are not a beginner's workshop on how to use the basics of Classroom Suite 4. Participants need to have created activities using the included templates in Classroom Suite and have used the Creativity Tools, including the Writing Tools, Design Tools and Story Maker. Both Mac and PC.

**Each webinar session is \$55** (No cancellations, no refunds)

**DAN HERLIHY** is an Assistive Technology/Technology Resource Specialist, Connective Technology Solutions, Inc., Hoosick, NY.

### SESSION #2 -

#### Beyond Check Work - Feedback and Tracking Besides Right or Wrong

★ **MONDAY, SEPTEMBER 12, 2011**  
10:00 am - 11:30 am Central Daylight Time

★ **MONDAY, SEPTEMBER 12, 2011**  
2:00 pm - 3:30 pm Central Daylight Time

### SESSION #3 -

#### Creating Interactive Graphing Activities

DATE AND TIME TO BE DETERMINED

## iDevices the Next Level 90 MINUTES

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 rinting
- 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.

**Registration fee \$55** (No cancellations, no refunds)

★ **THURSDAY, SEPTEMBER 29, 2011**  
1:00 pm - 2:30 pm Central Daylight Time

★ **THURSDAY, OCTOBER 27, 2011**  
10:00 am - 11:30 am Central Daylight Time

★ **THURSDAY, OCTOBER 27, 2011**  
1:00 pm - 2:30 pm Central Daylight Time





will

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1. Evaluation of the Effects of the Intel® Reader on Improving the Reading Performance of Adolescents with Learning Disabilities, SRI International, November, 2010.

The Intel Reader should not be relied on as the sole means of reading when a reading inconsistency or misreading of written text might put a person at risk for personal injury or economic harm. The Intel Reader is not intended for reading data that is primarily mathematical, scientific, or financial.

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# Closing The Gap

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# Closing The Gap

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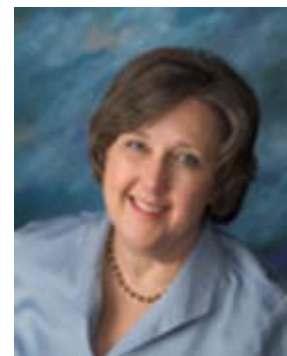
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## Closing The Gap

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**JUDI SWEENEY** has worked in the field of education since 1969. She has been a regular education teacher (secondary English) and special education teacher in both public and private schools. She also taught and managed projects and grants in assistive and educational technology at the University of Connecticut for over 10 years. In 1997, Judi founded Onion Mountain Technology, Inc., a firm devoted to providing evaluation, consulting, training, and presentation services to children, their parents, and school systems interested in increasing their knowledge of and access to assistive technology. The company has also developed a number of assistive technology products including the LoTTIE Kits, a series of low and mid tech tool kits for informal assessment and evaluation. Judi is also a national speaker and consults and makes presentations nationally on assistive technology.



# Acrobat X Pro - A Vital Addition to your

## assistive technology toolbox

**Once it was a dream of mine** to find a fast and easy way to digitize worksheets and tests for students who couldn't handle paper and pencil and then to have the ability to add speech to these files. Today it is a reality. The program I use is free for students to use and very reasonably priced for teachers to use in creating these digital files. In fact, my most valuable software tool over the past few years has become the answer to my dream -- Adobe Acrobat Professional for teachers and Acrobat Reader for students.

### ACROBAT PROFESSIONAL AND READER

While you may be very familiar with Acrobat Reader, you may have limited experience with its more powerful big brother, Adobe Acrobat X Pro. This new version of Professional is a major upgrade that allows you to create PDFs from your own files and so much more. Professional is not a free program, but educational institutions and people who work for them qualify for special pricing, starting at \$119 for a single copy of the program. Before you say to yourself, "Well, I can get a free program for making PDFs," let's make it abundantly clear that Professional does much more than just create PDFs (although it also does PDF creation better than any other program

out there). Most importantly, with Professional in just a few locations in your school, teachers and therapists can quickly create, modify and even change PDFs to distribute to their students. Students access these specially created PDFs in the free program, Adobe Acrobat Reader, wherever they can find a computer with the Reader software.

With Acrobat X Pro you can create PDFs; almost instantly digitize tests and worksheets for student access on the computer; add speech, sound and/or movies; label maps and diagrams; create on-screen fillable forms; make measuring worksheets for on-screen use; have text read to a student; share files regardless of operating system and much more.



## DIGITIZED WORKSHEETS

The most compelling reason for every special education classroom to have access to a teacher copy of Acrobat X Pro is the ease and speed that it affords when you are trying to digitize paper and pencil tasks. Several years ago, Adobe developed a new feature in Professional called Enable Typewriter. They made it infinitely simple to use. You merely scanned a worksheet, test or other form into the computer and turned it into a PDF. Then, with one menu choice called Enable Typewriter, you resaved the file. The file was now ready for the student to open in Reader, click and type anywhere on the document without changing it, and then save, e-mail and/or print their worksheets out.

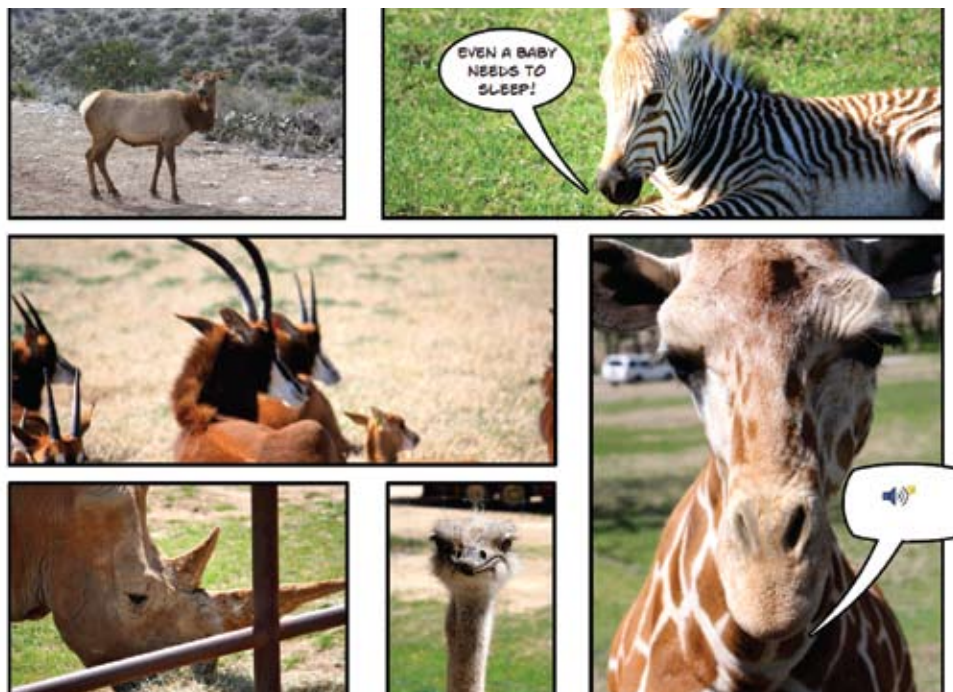
Within a short period of time, Adobe also added the ability to circle, put a box around any item, draw lines for matching or crossing out, add arrows and labeled arrows, highlight, add notes or text boxes, and record audio comments just by using the Enable command. The use of these Comment and Markup features have become so popular that, in the newest version of Professional, Enabling TypeWriter is included in the Save menu as a Reader Extended PDF.

This is a powerful feature for today's schools which must, by necessity, count every penny and make the most out of the limited time their staff members have to create or modify digital worksheets and tests. Schools need only to have a minimal number of purchased copies of Acrobat X Pro at teacher workstations. With the free versions of Acrobat Reader, students access, use, print, save and e-mail the files created in Pro. Training takes little more than 30 minutes for teachers who are using the software for this purpose, and an average worksheet can be digitized and ready for student use in far less than five minutes.

## INSTANT PRESENTATIONS

For years, teachers have been taking pictures from outings and field trips and placing them, one by one, into a PowerPoint presentation to send home with students. It takes times to place each picture on a separate slide, and I've always wanted to find an easy and fast way to create presentations out of photos and, if need be, add text to further explain the story. Acrobat X Pro has a feature called Create PDF from Multiple Files. If you place your photos in a folder and then select them all, you can drag them to the Combine Files window in Pro. The program instantly turns them into PDFs and then joins all the

PDFs together as one file. This new PDF file can be saved and then viewed in Reader as a presentation using the Full Screen View menu choice.



PICTURE 1 - Turn a Comic Life page into a talking onscreen lesson by making a PDF of the file and then recording what is written or implied in each speech balloon. Students click on the recording icon to hear the text.

## TALKING PDFS

So many of the children we work with need pictures that speak. They need to hear the name of the pictures they are learning to identify, to hear a printed set of directions or to hear the speech balloon in a social story created on the computer. With Acrobat X Pro, you can add a recording of your speech or any sound in any place on a PDF. Using the Audio Comment button, you click on a spot on the PDF, record your voice, and then place a symbol for the student to click on when they want to hear the recording.

You can attach multiple recordings per page and per PDF, and the recordings are saved with the file, so you can e-mail the PDF and be sure that the sound goes with it. Two of my favorite uses for this kind of PDF modification include making talking, on-screen flash cards and making talking social stories created in Comic Life.

For the former, I use the program that comes with Picture This... CDs and create a grid of pictures based on student needs. Often I use the word labels for the pictures; but for some students, I just add an audio comment button for each picture. When the student opens the PDF at home or school, she merely clicks on the recording symbol for each picture and she can hear the label associated with each picture.

With Comic Life ([www.comiclife.com](http://www.comiclife.com)), I have the ability to create a social story using actual photographs from the student's everyday life. With simple drag and drop, the program automatically fits the picture to cell size and then allows you to add speech and/or thought balloons to the pictures. When a student can't read the words in the speech balloons independently, we simply turn the comic file into a PDF in Acrobat X Pro and then add recorded audio comments to each of the speech balloons. Students, using Reader, click on the recording icon and listen to the recording. (See picture 1)

## READING

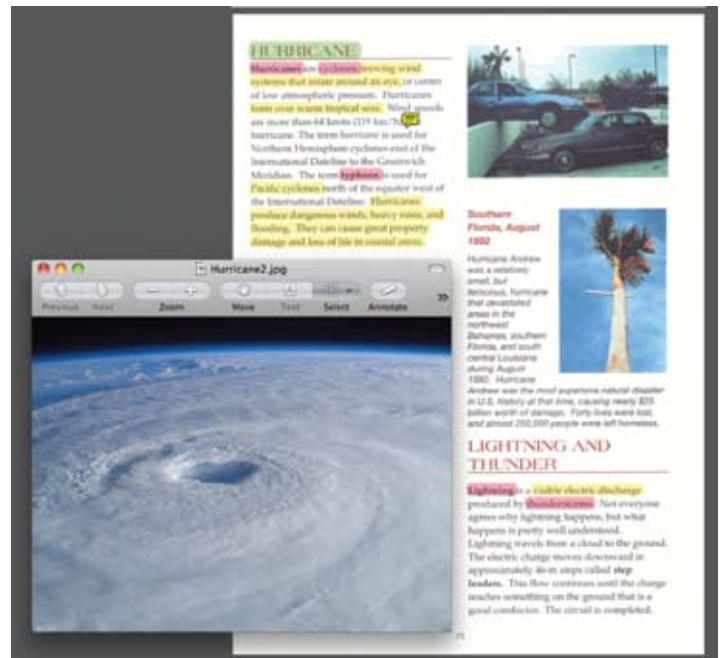
Acrobat Reader has always advertised its ability to read editable texts (they must be OCR'd in Acrobat X Pro if they come from a scanned document), and for years the program has provided tools for setting up reading order, defining or redefining zones, ignoring pictures or even zones of text, or verbally labeling all areas of the screen for students with visual impairments. Reading the text in Reader does not include highlighting as they are read. Acrobat reads from the top of the page to the bottom, and stopping or pausing the reading involves going to a nested menu each time.

However, since version 9 of Acrobat Pro, the program allows for reading separate zones of text. By activating Read Out Loud and then using the I-beam tool, a simple click anywhere within a zone results in the reading out loud of that zone. Because most questions in a PDF test or worksheet are separate zones, this makes it an ideal tool for having questions read to a student while they are taking an onscreen test in Reader. Furthermore, if a student is using CoWriter 6 to type in his answers, he can also use the highlight and select feature of the word prediction program to hear the question read out loud.

## LINKS AND HYPERTEXT

One of my favorite parts of Acrobat Pro is the ability to link a part of a PDF to another part, to an external file or to a Web site. I started by using the ability to link one part of a PDF to another part of it to help students who were having trouble finding the answers to chapter questions within the chapter. Using the Link tool, I was able to select the question (which is then shown to the student as a red lined box around the question) and link it to the page on which the answer to that question is found. When the student uses this feature in Reader, he clicks on the question and the link takes him to the page with the answer. He still has to find the answer, but we've narrowed down the search area considerably.

I've used the link feature to provide additional information for students who are reading a PDF text but need additional resources, pictures, definitions or information from a Web site. Clicking on these links opens a picture file or takes the student to a text file definition or to a Web site. This form of hypertext also works well with highlighted and color-coded texts created by teachers for students who need help in deciding what is really most important. (See picture 2)

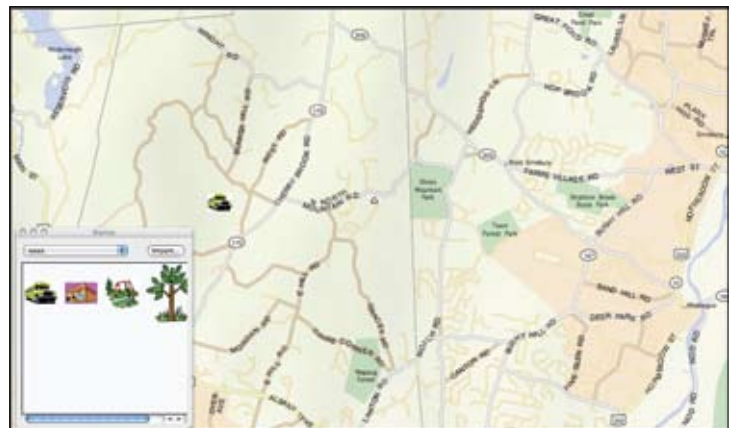


PICTURE 2 - Hypertext created in Acrobat X Pro can include hyperlinks to outside files. The student clicked on the green highlighted word "HURRICANE" and a picture of a hurricane opens on screen. Additional highlighting on the page is also done from within Pro.

## LESS FREQUENTLY USED BUT ALWAYS COOL TOOLS

There are a number of other tools that are available in Acrobat X Pro that can provide important accommodations for a variety of student tasks. All of these can be made available to the student by resaving the PDF in Acrobat X Pro with Extended Features. The student can access the appropriate tools for the tasks at hand in Reader only because the teacher has saved the PDF with these features in Pro.

One of my favorite tools for helping students add picture-based information or icons to maps involves the use of digital rubber stamps. Acrobat Pro comes with digital rubber stamps for business use (e.g. draft, confidential) so that they can be added with a click to any PDF. However, you also have the ability to make your own stamps

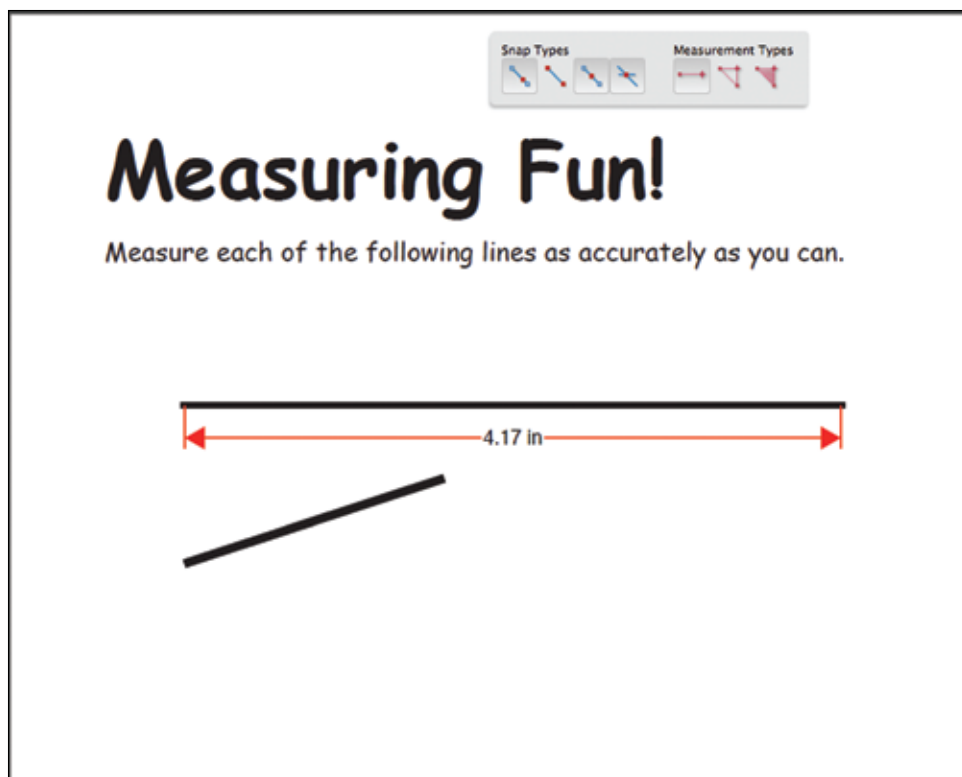


PICTURE 3 - A PDF map can be individualized with the use of custom digital rubber stamps created in Acrobat X Pro. Students click on the stamp and then click on the map to place it.

and group them on separate stamp palettes that can float above the map the student is working on. The student opens a PDF map of their community,

then stamps the location of the school (with a bus icon) or the park (with a playground icon). (See picture 3)





PICTURE 4 - With the Measuring Tools, students can measure length, perimeter and area with the click of a mouse. Scaling of measurements is also available.

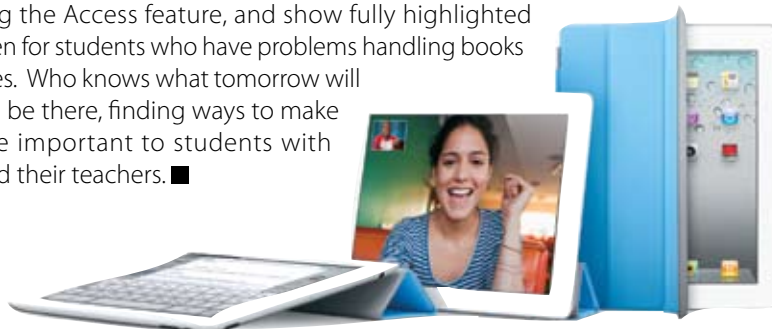
Using this same stamp creation process, I've also started creating rubber stamps with data collection check boxes and blanks. I print out screen images of programs that the student is using, turn these images into a PDF and then stamp a data collection form (about 2" x 2") to the right of the computer screen image on the PDF. I can collect data on time on task, errors, misclicks, perseverance, etc. right on the form and then add this information to the student's portfolio.

Another great tool for some tasks and some students is the Measuring Toolbar. With a worksheet or map PDF enabled for measuring, the student can measure length, perimeter, area and angles with just a series of mouse clicks. Preferences within this section allow the user to change the scale of measurement, something vital for measuring distances or areas on PDF maps. The ability to measure angles has been particularly valuable for students who can't handle or read a typical protractor. (See picture 4)

## THE FUTURE – PDFS AND THE IPAD

I continue to use PDFs with a wide variety of students who have special needs, but I'm constantly looking for new and different ways to make them work for me, the teachers with whom I work and the students I serve.

Today my interest centers on the use of PDFs on the iPad. This use is growing daily. I can now use enabled PDFs in the GoodReader app, have PixWriter PDFs read out loud on the iPad by using the Access feature, and show fully highlighted texts on the screen for students who have problems handling books and turning pages. Who knows what tomorrow will bring? I know I'll be there, finding ways to make PDFs even more important to students with special needs and their teachers. ■



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# Providing Immediate **WRITING** **ACCOMMODATIONS:** Using the Spoken Word

By Cindy Cavanagh

# 1

Digital  
Recorder

# 2

Scribe

# 3

Oral  
Response  
Task



**CINDY CAVANAGH, M.A.**, is a speech-language pathologist and has worked as a part of an Assistive Technology Team through Mississippi Bend AEA in Bettendorf, Iowa since 1991. She can be reached at <[ccavanagh@aea9.k12.ia.us](mailto:ccavanagh@aea9.k12.ia.us)>.

## **INDEPENDENT WRITING COMPLETED IN and OUT OF THE CLASSROOM**

involves a variety of skills, including selection of topic, readability, legibility, use of appropriately leveled language, age and grade appropriate sentence complexity, and selection of appropriate AT for the task and environment. Break-down can occur in many areas, and significant writing difficulties occur for a variety

reasons, including difficulty in use of pencil/pen to write letters, maintenance of letter spacing and size, location of keys on a keyboard, rapid selection of keys without mistypes, spelling, sentence generation, expansion of ideas around a topic, selection of high level vocabulary, use of age-appropriate sentence structures and complexity, and organization of information.



Students who have difficulty writing are disadvantaged in many important educational ways. Written expression is a significant part of the educational experience, from the first days in school through post-secondary environments. Writing is a way students are often required to engage with curricular materials and to complete assessment. When students have difficulty writing at grade level, the ability to maximize the learning experience and to demonstrate learning is diminished.

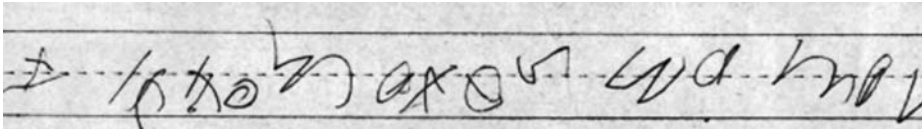
Effective instruction in reading and writing for individuals with writing difficulties can require a significant and long-term commitment for some students. These students need instructional opportunity to learn to combine letters to form words and words to form the sentences that will carry meaning at the highest level possible. It is also important to learn to develop cohesive and strategically placed ideas and to build the complexity of sentence structure and vocabulary that speaks appropriately to the task and to the audience. For students with writing difficulty with varied reasons, progress toward complex, independent writing can be stymied early in the school years.

**WRITING IS IMPORTANT TO LEARNING**

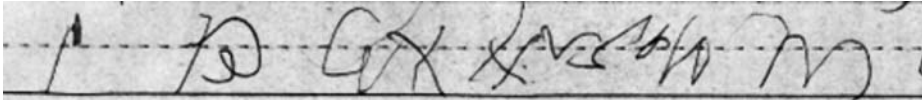
Given the importance of written expression for engagement with curricular materials and for assessment, it is critical to provide productive means for students to complete writing tasks as soon as the need is determined. The following example was written by a fifth grade student and exemplifies the critical need for some students to be able to have a means to “write” when they are currently unable write productively in the typical pencil/paper or keyboard way. In Example 1, the fifth grade student was unable to use his writing productively as he, like all viewers of his writing, could not read the words. The effort required to write the words consumed his attention and resources, limiting his ability to expand his writing to more complex levels of vocabulary, syntax, story development, etc.

Students with significant writing difficulty may need support in order to gain the educational benefits of writing. While effective instruction along with continued assessment and development of independent assistive technology use should be ongoing, it is important to help the student move thoughts and words to a written product to gain the immediate benefits of engagement and opportunities for more accurate assessment of learning. Independent, productive

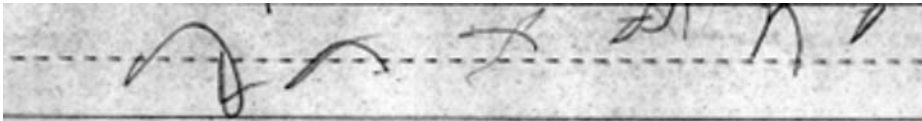
**Example 1**



"I like to make a snowman."



"I like to put a mouth, ears and"



"a nose on."

**Table 1**

How does the student write?	% who selected this as the most frequently used support for writing
Do the best they can with no support	30.5
Word prediction/computer	7.8
Speech recognition	6.8
Someone writes for the student	15.5
Digital recorder use	1.7
Oral responses accepted	22.1
Specialized paper used	7.5

writing is a goal. While skills and technologies are being acquired and developed to assist student’s independent writing, we are compelled to help the student participate adequately in the writing experience.

**SURVEY RESULTS – HOW ARE STUDENTS WRITING?**

A survey completed during the 2010-11 school year reviewed 100 K-12 teacher responses to questions related to the most frequently used type of support for students with writing difficulty. Over half of the teachers indicated that 75-100 percent of their student caseload read below grade level. When asked to indicate the percentage of those students not writing at grade level, half of the teachers indicated 75-100 percent

with difficulty writing. Of significance to the need to attend to the effectiveness of accommodations for students is the response to the question, “How do these students most frequently complete writing tasks?” Responses are provided in Table 1.

In combination, more than 75 percent of students with writing difficulty were reportedly either “doing the best they can” or using some type of oral response for writing tasks. These numbers suggest a need to ensure that:

- 1. Students are provided with effective accommodations while they continue to develop independent writing skills using technologies that support them.
- 2. The supports that are provided are considered “immediate” or “rapid” accom-



modations and may not represent long term solutions to the student's writing needs. Though these accommodations are not typically considered to be the perfect solution for all writing tasks, they may be needed by a student to write in a supported way:

- While teams investigate options for long-term development of tools and strategies that provide independent writing that results in standard text.
- While students are acquiring and learning to use technologies.
- As backup if technologies are unavailable (e.g. device failure).

3. The immediate accommodations, though not necessarily ideal as a long-term solution for all writing tasks, are still provided in a way that will maximize learning and independence when applied.

## SELECTION OF AN ORAL RESPONSE MODE

Given that teachers are using oral responses as a substitute for independent writing that results in or can be converted to standard text documents, guidelines were developed to help teams provide these accommodations quickly and effectively, in a way that can also promote learning during use. There are four ways that oral responses can be used as writing: use of a digital recorder, use of a scribe, acceptance of an oral response without conversion to text, and the use of speech recognition (see Fig. 2). Because speech recognition requires a range of training and support, at this time, it is not considered an immediate accommodation, but rather one of many tools that may eventually provide the student with independent writing. The remaining three oral response options (digital recorder, scribe and acceptance of oral responses) can be considered for use, based on these guiding questions:

- Can the student's oral skills provide a more effective option for immediate participation and/or assessment?
- Can the student's oral skills be used as backup to other currently used technology or accommodations?
- Are the student's oral skills appropriate for specific tasks within specific environments (e.g. copying daily assignments from the board; writing short answers on an exam; writing a letter to the editor, etc.)?

## EFFECTIVE USE OF AN ORAL RESPONSE MODE

As with other accommodations, it is important to consider systematic introduction and use as well as data collection and

Digital Record - I say it and record it.	
PROS	CONS
Fairly easy to use.	May require more teacher time to review the final product than a text product
Can be used immediately.	Requires file management.
Typical devices can be used (phones, small digital recorders).	Text is not immediately visible as the device is auditory only.
May be unobtrusive and acceptable by students.	Student may need a quiet environment that may not be available "just in time."
Parents can help the student use this.	Students may misuse the recording features.
Can be used independently.	May seem obtrusive and unacceptable by students.
<b>SELECTED GUIDELINES</b> <ul style="list-style-type: none"> <li>• Establish organization of files and system for file review</li> <li>• Provide a transcribed copy for student review</li> <li>• Establish a consistently available quiet environment</li> <li>• Establish rules for appropriate use</li> <li>• Practice initial use in enjoyable and nonacademic writing</li> <li>• Consider a variety of digital recorders and allow student input into selection</li> </ul>	

Writer-Scribe - I say it. You type it for me.	
PROS	CONS
Fairly easy to do.	The scribe may write something different than the student's words.
Can be used immediately (after initial scribe training).	The scribe may "over cue" the student.
Student is in control of the final text and can edit.	The student may be uncomfortable speaking in front of other students.
Can produce print and digital copies for later review.	The scribe may use a writing tool that is not editable.
The product can be used typically (e.g. turned in, taken home, reread, etc.).	Cannot be completed independently.
Parents can do this after brief training.	
<b>SELECTED GUIDELINES</b> <ul style="list-style-type: none"> <li>• Provide instruction and coaching to the scribe (see full guidelines)</li> <li>• Reduce cueing</li> <li>• Establish a comfortable environment that is private and quiet as required by the student and task</li> <li>• Use only editable tools when scribing (e.g. digital text on a computer or word processor)</li> <li>• Maintain a pool of trained scribes to make it easier for the student to use this option "just in time"</li> </ul>	

reflection on effectiveness. The simplicity of these accommodations may encourage complacency in these areas. However, given that these accommodations are so frequently used, it is important that we always ask the

question, "Is this an effective approach?" and provide these accommodations, along with other writing supports (e.g. graphic organizers) with consideration to guidelines for most effective use. The following section

provides a brief review of the pros and cons of each oral response. In addition, selected guidelines that were developed based on observation of use, student trial and team/teacher feedback are provided. The full text guidelines are available as individual PDF's at <<http://goo.gl/7EmxD>>.

## SELF-SUSTAINING SKILLS

Students who have developed skills that can be self-sustaining into the next educational environment will not experience the deleterious effects that can occur during transition. As with all assistive technologies and accommodations, the more a student knows, can use independently and can convey to other adults, the more likely there will be transition of effective accommodations to the next environment. With this in mind, it is important to establish those student skills for selection, use, management and justification for specific oral response mode accommodations. This can be accomplished daily by initially determining the most appropriate accommodation for a task, sharing the justification for that decision and gradually transferring responsibility for the accommodation selection to the student with guided practice and feedback.

## SUMMARY

Many teachers are currently using oral responses to provide students with writing difficulty a way to "write." Because oral responses are being used and because, when used with other supports, they can be an immediate tool for engagement and assessment, it is important to use these tools effectively. For many students, these immediate accommodations using their spoken word will not (and should not) be long-term, primary writing accommodations. However, when thoughtfully selected and used with consideration to the pros and cons, these accommodations can provide immediate and higher level access to curricular materials and more usable assessment of learning. Selected guidelines for using three oral response modes were provided. The full guidelines (including speech recognition) are available in PDF format at <<http://goo.gl/7EmxD>>. ■

Acceptance of Oral Response - I say it, you listen and instruct/grade/dialogue.	
PROS	CONS
Easy for teachers to begin to use.	May need a quiet environment (especially during assessment).
Can be completed in one session.	Student may be uncomfortable.
Can provide instruction in real time for the inexperienced learner.	There may not be established criteria for grading oral responses.
Student can experience immediate success in assessment contexts.	Listener may "over cue."
	There is no final text product for the student to review and edit.
<b>SELECTED GUIDELINES</b> <ul style="list-style-type: none"> <li>• Establish a standard quiet area and time</li> <li>• Establish class rules to be applied during this activity</li> <li>• Allow other students to participate in oral responses</li> <li>• Establish standards for grading of oral responses</li> <li>• Establish standards for cueing appropriate to the student and task</li> <li>• Review and coach protocol with other adults</li> <li>• Display the scoring rubric as it is completed</li> </ul>	



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# Tracking the effectiveness of DO-IT Interventions

## New Longitudinal Data on Students with Disabilities

By Sheryl Burgstahler, Elizabeth Moore, and Lyla Mae Crawford



### DR. SHERYL

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Many programs nationwide serve to provide computer access and other supports to promote the success of students with disabilities as they strive to complete high school, transition to postsecondary education, earn a certificate or degree, and secure a career. Few tackle all transition steps and supports, and little data exists to support the long-term impact of these interventions. Starting with data from 1992, the DO-IT (Disabilities, Opportunities, Internetworking, and Technology) Center at the University of Washington has been tracking the project participation and progress of students with disabilities as they transition from high school to college studies and beyond.

Specifically, the AccessSTEM/AccessComputing/DO-IT Longitudinal Transition Study (ALTS) tracks the project participation, as well as progress toward degrees and careers of students with disabilities who had a goal of postsecondary education while in high school and received DO-IT sponsored interventions (e.g., internships, mentoring, college transition activities) in high school and/or in college. Many DO-IT sponsored interventions were funded by the National Science Foundation (NSF). The study is designed in such a way that respondent content can be updated and data can be analyzed at any time.

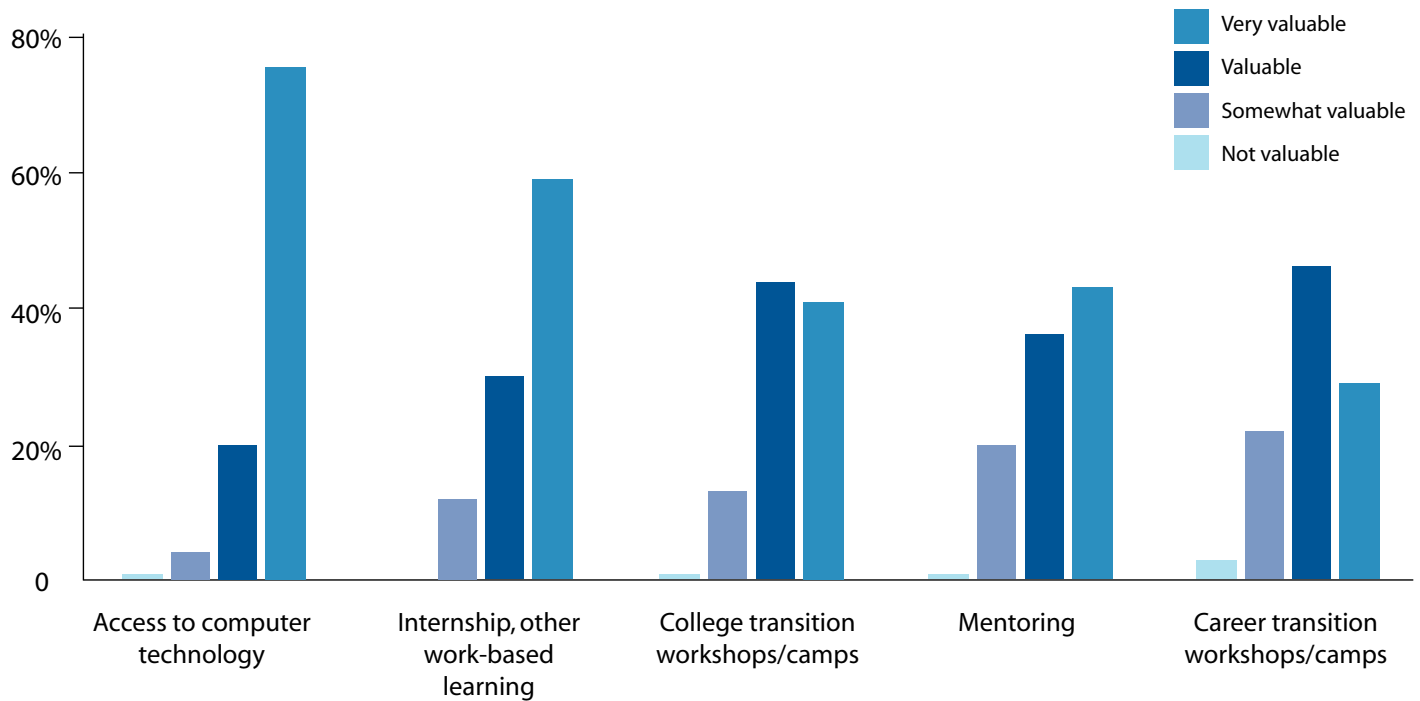
At any point in the study, some respondents are still enrolled in secondary school or are recent high school graduates; these students are designated “on track” as they progress through these critical junctures that lead to degrees and careers in science, technology, engineering and mathematics (STEM). The progress of ALTS respondents are compared with that of participants in the National Longitudinal Transition Study-2 (NLTS2) conducted by SRI International (see [www.nlts2.org/](http://www.nlts2.org/)), which is a follow-up of the earlier NLTS.

### STUDY PARTICIPANTS

To date, 294 students with a wide range of disabilities have agreed to participate in this ongoing study. Students are added to the study as they enter DO-IT programs and agree to participate in this research activity. Disabilities represented include mobility (44%), learning (22%), psycho-social (20%), hearing (18%), vision (13%), chronic health (6%), communication (5%) and other (12%). Fifty-six percent reported having one disability, 33 percent reported two, and 11 percent reported three or more disabilities.



**Figure 1 - Value of Interventions as Rated by Respondents**



## RESEARCH QUESTIONS ADDRESSED IN THE STUDY

The specific research questions of the ALTS are:

- (a) What are the educational achievements of participants in DO-IT interventions?

(b) Do they differ from other youth with disabilities with regard to educational achievements?
- (a) What are the employment outcomes of participants in DO-IT interventions?

(b) Do they differ from other youth with disabilities with regard to employment achievements?
- (a) Which interventions are regarded as most valuable?

(b) Are patterns evident linking student demographics or interests with the intervention(s) used and their perceived value, or with student pathways?

(c) Is there evidence of how interventions might be improved or expanded to be more beneficial or more broadly beneficial?

The full report of ALTS findings is located at <http://www.washington.edu/doit/Stem/tracking4.html>.

The following paragraphs provide a summary of findings related to the educational achievements of participants, as well as the level of participation and perceptions of the value of interventions.

## PROGRAM PARTICIPATION AND VALUE OF INTERVENTIONS

DO-IT practices rest on a large body of research and practice related to the challenges and progress of individuals with disabilities in postsecondary activities, including college and careers. Four primary sources of evidence are consulted when selecting practices to employ in DO-IT projects and programs: literature review, outcomes of prior projects hosted by DO-IT, suggestions from practitioners, and input from people with disabilities. Once appropriate evidence-based practices and promising interventions are identified, they are further developed to address specific characteristics of the DO-IT populations served by specific activities and the environments in which they are applied. They are formatively reviewed and modified for future implementation based on results. These DO-IT interventions include technology access, internships and other work-

based learning, mentoring, and college/career transition workshops for students with disabilities. Literature reviews and other findings are documented in an extensive collection on the Evidence-Based Practices of DO-IT Web pages that begin at [www.washington.edu/doit/Research/index.html](http://www.washington.edu/doit/Research/index.html).

In the ALTS study, participants are asked to identify the activities they participated in and rate the value of the activities. As this database grows, both in number of participants and number of interviews per participant, it is expected to reveal the long-term impact of DO-IT's program activities. That is, it will indicate what activities best benefit students and what activities are most important for achieving positive postsecondary outcomes.

- Technology access.** Few respondents (27%) reported having access to assistive software or hardware before DO-IT participation, but many more (64%) had access to assistive technology after participation in program activities. Thirty-four percent

reported that these adaptive technologies were provided, at least in part, by DO-IT.

- **Internships and Other Work-Based Learning.** Sixty-eight percent of respondents completed at least one internship. The total number of internships completed by each respondent ranges from one to nine.
- **Mentoring.** Ninety-six percent of respondents reported having access to mentors during program participation, up from 36 percent before participation. (Four of the remaining 13 participants had not yet been added to the e-mentoring community because they had just joined the program.)
- **College and Career Transition Workshops/Camps.** Eighty-one percent of the respondents indicated that they participated in a college or career transition workshop.

Respondents reported their perceptions regarding the value of program activities as they prepared for college and careers, in order from most to least valued as indicated by the percentage of valuable and very valuable ratings. As is graphically presented in the figure 1, access to technology was reported to be the most valuable intervention, with 96 percent of the respondents noting that the intervention was valuable or very valuable, followed by internship or other work-based learning rated as valuable or very valuable by 89 percent of those who participated. College transition workshops or camps were rated nearly as high with 85 percent of the participants rating this activity valuable or very valuable. Mentoring was also seen very positively, with 79 percent indicating that it was valuable or very valuable.

## CONCLUSION

Analysis of ALTS data reveals a large increase in access to assistive technology before participation and after participation in activities reported in the study. Respondents also made significant gains regarding access to mentors. Respondents rated highly all of the evidence-based practices employed by DO-IT, in order from highest to lowest average rating: access to computer technology, work-based learning, college transition workshops/camps, mentoring, and career transition workshops/camps. ALTS respondents succeed in transitioning to postsecondary programs at a substantially higher rate compared to national data. Of those who attend college, about half of each group began their studies at a technical/two-year college. Data collected and compared to national samples suggest that the ongoing evidence-based program supports may have made a difference in the ability of students with disabilities to successfully transition to and succeed in college. DO-IT is committed to continuing this longitudinal

## ACADEMIC PROGRESS OF PARTICIPANTS

**High school graduation.** Overall, 270 ALTS respondents had graduated from high school at the time of the most recent interview. Most (78%) enrolled in a DO-IT program prior to high school graduation. Of these, 89 percent have graduated from high school. Nineteen of the remaining 24 were last interviewed before their calculated graduation year, and the remaining five had not yet graduated as of the fall after their calculated graduation year. Two of these were noted as completing high school while attending community college through the Running Start program. Thus, the available data indicate a 100 percent high school completion rate. In comparison, the rate of high school completion for youth with disabilities was 54 percent for 1987 and 70 percent for 2003 in the NLTS and the NLTS2, respectively.

**Postsecondary education.** The following data was reported by the 270 high school graduates interviewed:

- 95% (257) enrolled in college, with slightly more attending four-year colleges than two-year colleges.
- 36% (106) of ALTS respondents have graduated from 134 postsecondary programs. (Twenty-six individuals each completed two programs, perhaps a two-year and a four-year program; perhaps a four-year and a graduate program. One individual completed three programs.)
- 56% (165) were still enrolled or enrolled in another college or graduate program.
- A total of 27%/56%/50% of ALTS respondents at two-year/four-year/graduate schools majored or minored in STEM.
- 95 have earned 122 postsecondary certificates/degrees; 55 (45%) of these degrees were in STEM fields.

Comparisons between ALTS respondents and other datasets from NSF and the National Longitudinal Transition Study (SRI International, 1987-1993) reveal that ALTS participants attend college at a much higher rate. Specifically, 257 (95%) of ALTS' 270 high school graduates attended college; 245 (95%) of these, within two years from high school graduation. By comparison, although 77 percent of the NLTS participants had postsecondary goals in high school, only 31 percent of these individuals took a postsecondary course within two years after high school. About half of both NLTS and ALTS participants who attended postsecondary school began their studies at a technical/two-year college. When compared with their non-disabled peers, students with disabilities are more likely to enroll in technical/two-year schools and to attend part time and less likely to graduate.

research regarding the success of individuals with disabilities in moving through critical junctures to college degrees and careers. Areas of outcome/impact data collection will continue to include transition steps; enrollment and success in high school and college; academic progress; persistence and success in securing undergraduate and graduate degrees and employment; accommodations and supports used; and participation in work-based learning, mentoring, and other activities. As schools, programs and individuals offer supports based on evidence of impact, more individuals with disabilities will be engaged in successful careers, and the fields they enter will be improved with their expertise and perspectives.

## ACKNOWLEDGEMENTS

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## Autism is exploding at an alarming rate

from an incidence of one in 150, to the latest statistics of one in 38 children (with some data reporting a 17-fold increase). Resources are pouring into research and intervention to address this serious public health issue. In spite of greatly enhanced resources, outcomes for those most severely disabled by autism (many of whom are non-verbal) remain as bleak today as 40 years ago, when institutionalization was the norm. Indeed, for non-verbal individuals with autism, quality of life has not significantly changed (Iacono, Johnson & Forster 2009).



## AAC Meets ABA: Natural Aided Language Interventions

for Individuals with

# Autism and Complex Communication Needs

By: Joanne M. Cafiero, PhD



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## Applying AAC Interventions to Individuals with Autism

Applying AAC interventions to individuals with autism represents one of the most challenging, if not THE most challenging work for AAC practitioners. As a group, these children, adolescents and adults appear difficult to motivate, find new tasks aversive, often do not initiate any communication, and have aberrant behaviors and motor planning difficulties that mask cognitive and communicative competence.

Prior to 2006, it was assumed that a large percentage of individuals with ASD were also cognitively delayed. This was an evolving assumption that came

from large-scale misrepresentations of scores on adaptive measures that were labeled as cognitive measures. In addition, many testing instruments were language based and relied on verbal responses, further skewing results. (Edelson, 2006). More practitioners and families are realizing that their initial hunches about limited communicators with autism are true: "there is something in there" and that there is far more potential than current instruments can measure. This new information has profound implications for the AAC practitioner.



# What works?

The National Academy of Sciences (NAS) report *Educating Children with Autism* (2001), identified empirically validated treatments for children on the autism spectrum. One of the most effective strategies found was Applied Behavioral Analysis (ABA). There are many strategies that fall under the ABA umbrella: Incidental Teaching, Verbal Behavior, Discrete Trial Training and Pivotal Response Treatments. Pivotal Response Treatments (PRT) is the strongest of all ABA strategies, with over 200 published and 400 ongoing studies (Koegel & Koegel, 2011).

Since 2001, there has been a growing body of research validating AAC interventions for individuals with autism, however, the most robust and conclusive research still exists in the behavioral areas. Most behavioral communicative interventions address speech only or labeling in tabletop settings. PRT addresses language as a skill set that must be addressed naturally in real settings.

The National Research Council (2001) also named the features of effective ASD programs and included parent and teacher training, data-based instruction, play and leisure, and access to typical peers, planned repeated learning opportunities and emphasis on functional spontaneous communication. Two of these areas, functional spontaneous communication and planned repeated learning opportunities, have strong applicability to AAC interventions.

## What is ABA?

**ABA is a system of treatments in which behaviors are taught through rewards and consequences. Progress is carefully measured and interventions modified accordingly. (Koegel & Koegel). ABA includes the following methodologies: Incidental Teaching, Pivotal Response Treatments, Verbal Behavior, Natural Aided Language and Discrete Trial Training.**

## **PRT is a developmental and behavioral approach that provides opportunities for learning within the context of the individual's natural environment.**

PRT is a merging of the traditional ABA with naturalistic interventions. PRT evolved from Lovaas' discrete trial training where control was clearly in the hands of the teacher or facilitator. With discrete trial ABA it was possible to teach spoken words as isolated responses, but it was not possible to teach language and communication, which by nature, is dynamic, co-constructed exchange of perspectives, thoughts, ideas, wants and needs. The complexity of language could not be addressed in a simple stimulus-response format. The original term for PRT was Natural Language Paradigm (Koegel, O'Dell & Koegel), 1987). Through the Natural Language Paradigm dramatic increases in vocabulary were elicited.

Pivotal behaviors are those behaviors that have global positive effects on other behaviors rather than isolated skills that are demonstrated in one environment only. Pivotal skills are those skills that, when acquired, generalize more readily to different environments, activities and communication partners; and when

targeted, lead to large, collateral changes in other, often untargeted areas of functioning and responding. PRT is primarily a "speech only" intervention, however, the procedures and protocols for PRT represent the best principles of communication interventions, including accountability protocols for data collection (Koegel & Koegel, 2006). Pivotal Response Treatments were expanded to address other core pivotal behaviors, including motivation, self-initiation, self-management and responsivity to multiple cues.

PRT interventions use shared control, communication partner choice, contextual reinforcers, contingent reinforcement, and mixture of acquisition with maintenance skills with a predominance of maintenance skills to maintain motivation. All reasonable attempts to communicate are reinforced. PRT is more than an isolated intervention, it is a "way of being" for a communication partner that can be implemented throughout the day, rather than for a fixed 25-40 hour-per-week time period.



## Synthesis of the Natural Language Paradigm (PRT) with Aided Language Stimulation

In 1995, the principles and accountability of the Natural Language Paradigm were applied to low-tech AAC interventions, defined as Aided Language Stimulation (Goossens, Crain & Elder, 1992). Aided Language Stimulation, (ALgS) is receptive language input with the expectation, without pressure, that expressive language will occur. ALgS was primarily implemented with low-tech communication boards, however, the principles are applicable to all tech AAC, from picture cues to dynamic display devices to keyboard communication. In this model, the speaking communication partner takes an active role and augments spoken language with visual symbols or words. Other Aided Language strategies include Aided Language Modeling (Drager, Postal, Carrolus, Castellano, Gagliano, and Glynn), System for Augmenting Language (Ronski and Sevcik, 1996) and Natural Aided Language (Cafiero, 1995). Each of these strategies is based on the active role of the communication partner. In these models, the symbolic language on the tool or device is viewed as a second language, and therefore, the communication partner pairs his/her speech with the language on the AAC – augmenting verbal input with visual input. This strategy applies not only to the use of picture symbols but also to written and typed (keyboard) language.

Natural Aided Language (NAL) is the synthesis of ALgS and PRT (Cafiero, 1995). Natural Aided Language, like traditional ABA strategies, defines observable, measurable outcomes, for both speaking and non-speaking communication partners and uses data to guide the course of the AAC intervention. Natural Aided Language assumes a mutuality and collaboration of communication partners, the “shared control” of PRT.

## THE CHALLENGE: Integrating PRT into AAC Interventions Through Natural Aided Language



### Motivation

As in PRT, NAL addresses the need to target motivation. The speaking communication partner identifies those high value reinforcers that are chock full of language opportunities. Note that reinforcers need to be varied and can change; a high value reinforcer may become less preferred and even aversive. Assessment occurs regularly with reinforcer assessments and sensory preference inventories. These target activities, persons, toys and tools and items that will be the context for communication. Using what is most valued to the communication partner will insure a level of engagement.

### Available Robust Vocabulary

AAC tools are prepared with enough vocabulary to provide robust language stimulation through aided language/augmented input. Vocabulary should include nouns, verbs, descriptors and prepositions. Terminating vocabulary, such as “I’m finished,” is included so that the non-speaking partner has that control. Robust vocabulary is necessary whether the AAC is a voice output device, a communication notebook, PODD or keyboard. Providing access to robust vocabulary is a statement of belief in the communicative potential of the non-speaking communication partner.

### Preparation

When the reinforcing toys and activities are identified, the observable, measurable communication behaviors can be defined. Availability of two or three of the identified activities enables choice-making and an additional communication opportunity.

### Communication Targets

For the completely non-speaking, early communicator, the target may be a first spoken word or word spoken on a device, an exchanged text or picture cue, or an activated single switch device. Other targets include combining two words as a response, combining two words as a spontaneous utterance, answering or asking “wh” questions.

### Communication Opportunities

The obvious potential communication opportunities are identified, and the practitioner will create and define other opportunities while being open to any serendipitous communication opportunities that will inevitably come up when control is shared between communication partners.

### Present Levels of Performance: Baseline

Present levels of communication are determined (baseline) for the identified targets. Videotaping is a great way to determine these levels; they can be reviewed, rewound and studied. Often, sadly, our non-speaking communication partners elicit language that we miss in real time and discover on video.

### Know Your Communication Partner

Familiarity of the communication partner in a relaxed, low demand environment is important. If the practitioner observes and casually interacts often enough, the AAC interaction will be more enjoyable, relaxed and effective.

### Prepare the Environment

All toys and activities should be ready and available. Target items should be “delivery-ready” when the student requests it. Have at least two of these items ready to use. This prevents loss of focus or interest. Also, lack of readiness can create a situation where a communicative behavior is not rewarded immediately. Considering the principles of ABA, it is important that the reinforcement occur immediately after the target language occurs. Minimize environmental clutter to promote engagement in target items/activities and discourage non-goal directed wandering.

### Be a Prepared Communication Partner

A prepared communication partner has an intimate knowledge of the architecture of the tool or device and knows where core and fringe vocabulary are located. A prepared communication partner has developed fluency in using the tool or device so providing augmented input is natural. (See The Natural Aided Language Planner).

### A Prepared Communication Partner:

✓	Is familiar with the non-speaking partner
✓	Identifies reinforcing activities, toys, items
✓	Identifies language/communication targets
✓	Identifies, creates, communication opportunities4
✓	Identifies PLOPS, codes baseline
✓	Prepares AAC tool
✓	Learns architecture and vocabulary of AAC tool
✓	Prepares environment

# THE CHALLENGE: Integrating PRT into AAC Interventions Through Natural Aided Language



## Get Your Partner's Attention

The first task of the speaking communication partner is to get the attention of the apprentice AAC user if that user is not focused. For young communicators, high fives, tickles, exaggerated facial expressions and tempting with target toy or item are effective. For adolescent and adult communicators, activating target item, visibly enjoying target item, physical proximity and ebullient greetings can also help focus attention.

## Create Communication Opportunities

The language goal for any individual is defined by the acronym SNUG (spontaneous novel utterance generation). How to get there? This is one hierarchy to consider. Note that the most subtle prompt is one in which the student responds to the environment, rather than a verbal, physical or gestural prompt. Time delay/waiting is also an important part of creating a language opportunity. Time delay can occur between any of the communication prompts below.

## Hierarchy of Communication Prompts

- Natural Environments
- Engineered Environments
- Environmental Language Prompts
- Tempting
- Asking
- Commenting
- Modeling
- Natural Environmental (no language)

- 1** Arrange the environment or sabotage the preferred toy or item to create a need for requesting or help.
- 2** Tempt the communication partner with the desired item is another indirect stimulus by creating interest.
- 3** Ask "why" questions regarding the item with the expectation that the communication partner will respond.
- 4** Integrate AAC into your verbal language: commenting, question asking.
- 5** Create scenarios for communication partner to ask "wh" questions.
- 6** Make your communicative input models for language learning
  - Respond to communication with more communication. If your communication partner gives you a word, give that word back. In this way you acknowledge, reinforce and, in some cases, shape the utterance with more language. As in PRT, the reinforcement is contextually relevant; reinforcing language with acknowledged language rather than with "Good pointing," "Good using your device" or "Good talking."
  - Give the word back with an additional word to model language expansion. For example, if your partner says: "Turn on," you respond with "Turn on the cd player."
  - Create robust, frequent language opportunities; PRT protocols aim for at least one opportunity per minute.
  - Prepare to follow your communication partner's lead, whether it is physically moving from one play item to another or simply changing a topic.

## Accountability

An essential component of any AAC intervention is observable measurable outcomes and interventions that are guided by periodic analysis of progress. The first step in accountability is measuring the famous PLOP: present levels of performance. It is important to name the objective(s) for both communication partners. (The term "AAC user" is not used to distinguish one partner from the other, for in effective AAC interventions, both communication partners use the AAC for input and output).

## Measuring Communication Partnerships

Accountability is important for all communication partners, speaking and non-speaking. What are the specific procedures and behaviors of an effective communication partner? (See Communication Partner Skillsheet)

Snapshot of Communication Partner Skillsheet	
+	Model
+	Reiterate and Give Back
+	Expand
+	Shape/Correct

## Balancing Rigid ABA Strategies with Presuming Competence: The Art of Communication Partnerships

It is important to balance the strong accountability element of ABA with Ann Donnellan's ethical philosophy of presuming competence in any intervention for those with complex communication needs. Classic ABA protocols are firm with clear outcomes; communication objectives are clearly defined and strategies are identified to meet those objectives. PRT includes shared control and partner choice within its ABA parameters for more natural approach to language learning. This is the science of a PRT/NAL/AAC intervention. It is, above all, tidy and quantifiable, however, the practitioner should resist being hell-bent on reaching those outcomes at any cost. Attending only to the defined measurable outcomes can potentially veil real communicative intent and global communicative competence. Real communication is often spontaneously untidy and disorderly with breakdowns, repairs and surprising novel topic changes. The AAC practitioner should approach the individual with autism as a person with something to say, over and above those defined outcomes and available vocabulary. This requires



## Natural Aided Language Communication Partner Checklist AAC & PRT

Student \_\_\_\_\_ Partner \_\_\_\_\_ Observer \_\_\_\_\_

Dates

	AAC with PRT Procedures				
1	Select and prepare relevant materials.				
2	Provide AAC.				
3	Get attention / focus student.				
4	Wait expectantly, use eye contact and body language.				
5	Tempt student with materials; activate key words on AAC.				
6	Make comment about target item with AAC, repeat and wait.				
7	Ask "wh" question and pair with AAC.				
8	Acknowledge any attempt to respond by reiterating with speech and AAC.				
9	Use interrupted behavior chain.				
10	Model correct response using speech and AAC.				
11	Withhold access to item until student uses verbal, vocal, AAC or gesture.				
12	Refocus as needed.				
13	Model communication with speech and AAC.				
14	Expand student verbal/gestural/ communication with AAC.				
15	Withhold item until student expands communicative request.				
16	Keep session pleasant and brief.				
17	Provide tool or prompt for student to end session.				
18	Use AAC to model ending of session.				
	# Achieved				
	%				
	Feedback Received				

Date \_\_\_\_\_ Comments \_\_\_\_\_


## AAC/PRT Intervention Planner

Student \_\_\_\_\_

Communication Partner \_\_\_\_\_

Date: \_\_\_\_\_

Activity:

Target(s):

Materials:

Communication Opportunities:

Maintenance Vocabulary


Acquisition Vocabulary


Activity:

Target(s):

Materials:

Communication Opportunities:

Maintenance Vocabulary


Acquisition Vocabulary


flexibility and ongoing assessment. This is the heart and the art of the AAC relationship. Simple; but certainly not easy.

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# THE LOGAN BRAILLECOACH

By Julianne La Fond Hammond

## REMEMBER BRAILLE?

Most Americans recognize the sight of a person using a white cane to plot a path down a sidewalk as a person with blindness, and they know better than to pet the working dog guiding her owner through public transport. They wait patiently for people in wheelchairs to enter airplanes before their fellow passengers, and they marvel at the rapid hand speed of the signing group at the mall. I am guessing that observers also marvel at the runner with the thin titanium leg with her sneakered-foot on the jogging track. What I hope you see sometime soon is a young person on a train or bus, listening with ear buds, not to music, but to the letters and words of Basic Braille Level One. He is using a lightweight, portable instructional device, the BrailleCoach from ProxTalker.com, LLC, to practice reading Braille. He is learning to read and, thus, to write. He already knows how to listen!



### WHY THE LOGAN BRAILLECOACH NOW?

What the casual American observer has not seen lately is the young Braille reader at the library, or the bus passenger dozing with fingers resting on the Braille text of a good novel. This simple act of reading is significantly rare in our current culture, even though it was commonplace in the 1950s. In the last century, until about 1965, at least 50 percent of people who were blind were facile, the precise word is literate, in Braille. In that era, most blind children were educated in special schools, just for the blind, that used all available technology and started Braille with children as young as four years old, when a sighted peer would begin to learn to recognize the letters of the alphabet. It is important to note that word – literate. Would a reader be chagrined to know that approximately only 10 percent (rates range from nine percent to 12 percent in government surveys in North America) of the blind community reads and writes Braille today? If the reader responded “no” with a confident nod to the mind-boggling pace of technological innovation today, it is understandable. Innovation has led to a fantastic increase in the ability to access information for any person with any disability. But for a person with blindness or low vision, one should be hesitant to equate the use of digitized audio, microprocessors, post space-age computer programs, with personal literacy. And literacy is the key to life-long learning, employment and the ability to function in society on a par with others. The inverse of this startling figure is that perhaps 90 percent of the blind community are illiterate.

### WHAT IS THE LOGAN BRAILLECOACH?

The Logan BrailleCoach Braille training device uses RFID (radio frequency identification) technology to make “speaking” Braille embossed tags. Simply pick a tag, place it on the raised button, and press to hear what the embossed pattern signifies. The set of tags that come with the device represents Grade 1 Standard Braille and an introduction to Grade 2 Braille structure. BrailleCoach operates

in three different modes: letter and dots, letters, and letters and words (introduction to Grade 2). This offers a graduated series of mastery levels that parallels traditional classroom or one-on-one instruction.

I define basic literacy as the mastery of school-based reading and writing skills that are the foundation for continued learning, demonstrated by success at around an eighth grade level. The higher functional literacy,

then, is the use of these skills in the home, higher level education, work environments, and out in the community. For this level, the student must have access to print for meaningful communication – reading and writing – Braille. Another informative statistic is that of the adults with blindness who are fully employed, a full 90 percent are Braille literate.

### WHY NOT BRAILLE?

Braille training fell out of fashion in the public schools for several reasons, which I will attempt to summarize here: over-reliance on popular teaching methods that favor the exclusive use of residual sight; the seductive qualities of audio books and computer learning activities; the process of full classroom inclusion; the attitude that Braille is difficult to learn; and the perception that using Braille will mark a person as

blind, especially significant to those with low vision. Most blind students and those with low vision participate in general classroom environments where reading is supplanted by listening, and where voice-to-text programs create documents for them. (Approximately 85 percent of blind children attend public school in the United States). Special magnification devices make text easier to read. Many low vision children face an uncertain vision future as their ability to see degenerates with maturity. As class work becomes more challenging, many of these students fall behind in upper elementary grades. Parents realize that their children cannot read and have no physical writing skills. For many, the process of learning Braille will start later than recommended. That is not the only challenge facing the Braille learner in elementary or middle school. Braille instruction is often given just once a week, with little opportunity for daily practice and coaching. This is not how students learn to read! And, in some instances, the person teaching Braille is not fluent or especially qualified, as higher education has failed these persons as well.

Perhaps a common sense guide may be that many useful tools – Braille, print, technology, human readers and audio versions of printed material – be put in place that make learning to read and write an attainable goal. Do not forget that advances in technology have made the production of Braille documents – poems, compositions, stories, themes, doctoral theses – easier, faster and less tedious than mid-nineteenth century hand punching paper! Print articles can be scanned into translation software to produce Braille documents. To see these items in action, visit technology centers for the blind or state schools for the blind. For some lucky students, the school district provides the latest in refreshable Braille personal digital assistants. I recommend a quick Internet search to read the Christian Science Monitor article for July 19, 2007, “Braille Literacy Flags...” This piece is actually more heartening than its title indicates.

## WHAT ELSE DOES BRAILLECOACH DO?

There are blank tags available for the BrailleCoach. These allow a user to progress to Grade 2 Braille or contracted Braille, or to add specific vocabulary and custom tags to the user's group of words. One needs a Braille Labeler (not included with device) to create new embossed labels to place on the tags. The actual recording of these custom tags can be done in less than two seconds. The programming tags, labeled in Braille, are used to increase or reduce volume, determine battery level and to make customized recordings.

There is a headphone jack for private study and listening.

I spoke with James Hollins concerning the state of Braille in the U.S. today. He is a state rehabilitation teacher for the blind and visually impaired in Kansas City, MO. He was using a Braille typewriter by the age of eight, having lost his sight completely at the age of five. He started learning Braille before he turned six. He is quick to point out that his client base is generally less literate than he and his peers. He states with passion that “listening is not literacy”, and that the current rate of illiteracy is totally unacceptable to him. He has the BrailleCoach in the field and finds it to be startlingly efficient, especially for the motivated student. He thinks that it is suitable for a variety of learners, even those in the first grade. He feels that the older “newly blind” are accustomed to this style of independent self-paced learning and progress quite quickly. He agrees with the manufacturer that BrailleCoach does not take the place of a coach or teacher, especially over a long period of time. It best functions in conjunction with a good coach or teacher who can supervise and evaluate skill acquisition and accuracy. It places the student on the fast track to writing – the actual use of one's hands to commit words to “paper”, today through a Braille keyboard to a Braille printer. Mr. Hollins is an education consultant at ProxTalker.com, LLC, brought on board to assist in its development as someone “with an inside track” on what it means to need, learn and use Braille.

## IS THERE A BRAILLE REVIVAL?

I suppose when general public awareness increases about a topic usually discussed in specialized councils and advocacy groups, it is possible to sense new energy devoted to educating people with a specific disability. So, at least the discussion is having a revival! In some places, Braille never left the stage. The fact that BrailleCoach has come to market more accurately answers that question. A missing piece of the learning puzzle is finding its way back to the classroom.

Carol Castellano (then president of the National Organization of Parents of Blind Children) wrote in the November 1998 issue of “In Touch” (NJ-POBC newsletter):

“... Braille is a wonderful literacy tool... It enables the child to read fast and without fatigue, to keep up with class, to take notes and read them back. Braille opens up the world of the analysis of literature and of higher math, and the sciences. Braille levels the playing field...”

ProxTalker.com, LLC, founded and directed by Glen Dobbs and Kevin Miller, is also the designer and manufacturer of the Logan ProxTalker, a voice output communication device for people who cannot speak. And guess



BrailleCoach Base Model, including carrying case and 26 Braille Alphabet tags.

what! You can put Braille labels and other tactile symbols on the ProxTalker voice tags! “Our customers began using the ProxTalker communication device with tactile symbols to enable nonverbal or pre-literate blind children to communicate. This is what ultimately inspired us to develop the BrailleCoach”, said Glen Dobbs, president of ProxTalker.com, LLC.

ProxTalker.com, LLC offers a free two-week trial of the BrailleCoach to teachers and professionals. It welcomes feedback from its users and is excited about its contribution to literacy within the blind and low vision community. Go to [www.proxtalker.com](http://www.proxtalker.com) or call 877-776-9175 for product information, to purchase, or to sign up for the “Try Me” program. The list price is \$995 for the base model. The manufacturing and administrative headquarters is at 327 Huntingdon Avenue, Waterbury CT 06708-1413.

## ABOUT THE AUTHOR

Julianne La Fond Hammond, M. Ed., is an Educational Consultant for ProxTalker.com LLC. She founded and was the former director of Connecticut Conservatory, New Milford CT, a pre-professional school of the performing arts for the gifted from 1981 - 1996. She was also a teacher/administrator in Newtown, CT from 1973-1980, during the major implementation of “mainstreaming” of students with disabilities into regular classrooms. She can be contacted at 305-304-6320; <[jqllhammond@gmail.com](mailto:jqllhammond@gmail.com)> or <[julianne@proxtalker.com](mailto:julianne@proxtalker.com)>. ■



# Apps for Older Adults

By Andrew Gomory

**A** lot has been written about apps and their impact on users

and vendors in the world of augmentative and alternative communication (AAC) and speech generating devices (SGDs). Older adults are typically slower to adopt new technology than younger adults and children, but the effect of smart phones and tablet computers for this age group has already been significant and is growing quickly. In this article, I'd like to touch on our experience at Lingraphica, both with our own apps and with other apps that our users have found useful. I'll also draw on the app experience of other professionals working with adults with aphasia.



Joe Greenhouse and Andrew Gomory.

## CHOICE

One of the most daunting aspects of using apps is that there are so many. But choice is good, isn't it? And more options are better than fewer. The research on human decision-making clearly answers this question with, "It depends." A teen can effectively sift through 50 different types of sneakers, but Medicare participants can only sift through a handful of drug plans. An overwhelming number of choices leads people to defer decisions, not make them. Most older adults find current technology foreign and daunting, so limiting choices and providing guidance is a critical part of ensuring adoption and success.

## ACCESS

Smart phones and tablets are touch screen devices. They are normally operated with the touch of a finger, but can also be operated with a special stylus. RJ Cooper makes a switch interface that allows any standard switch to run an iPod or iPad. Another consideration is that many controls are small. Even if an

app has large, friendly controls, the user will have to go through some small controls to launch the app. The same issue applies to vision. Even if the app can accommodate low visual acuity, the controls leading up to launching the app may not. If access is an issue, then a dedicated SGD may be a better option.

## FAMILIARITY

Older adults are often thought to be technology phobic. It is more accurate to say that it becomes increasingly difficult to acquire technical knowledge as we get older. Comfort with a technology often comes from exposure to the technology at a time when learning was easier. Thus, previous computer use often makes it easier for a patient to use an SGD. Since smart phones and tablets are so new, very few older adults have prolonged or pre-stroke experience with them, making the learning curve steep.

As Marjorie Nicholas has pointed out, good general cognition is one of the most important factors in being successful with an SGD. Smart phones and tablets are, in some ways, more taxing than traditional SGD's and in some ways less. For example, the user initially goes to a home screen where the app is chosen. This is more cognitively taxing than starting a dedicated SGD that powers up into the SGD application. On the other hand, apps themselves are often easier to run because they often have limited functionality and are operated with intuitive built-in gestures, like scrolling through lists with the flick of a finger.

## SMALLTALK APPS

Lingraphica makes apps under the name SmallTalk. Each app is focused on either communication or therapy. Each communication app focuses on a narrow functional area, like conversational phrases, descriptions of pain or managing dysphagia. The therapy apps are articulation videos that also focus on a small area, such as phonemes, consonant blends or oral motor exercises. Each app has approximately 50 phrases arranged in a single list so that there is no hierarchy to navigate. Each list item contains an image and text that reinforce each other to make the meaning clear. The user taps on the list item to hear it speak or to play the video. For simplicity, only minimal editing can be performed, such as removing and rearranging phrases, and the only setting is the choice of a male or female voice.

We included many of the features of the Lingraphica that we have found to work well for aphasia over the years. When an icon is selected and speaks, it gets large (projects),

which helps focus attention. The text, image and voice are presented simultaneously to provide multimodal stimulation. We use the Lingraphica icon set, which has an adult look and feel. Icons are always present, in addition to text, so the user does not have to be able to read. And the subject matter and vocabulary are appropriate for older adults – having a stroke, describing pain, needing dentures. All operations work with a single touch or a sliding gesture to scroll. We include the use of videos and “Phrase Strips,” phrases made of multiple icons that each represent a single word, that are useful for cueing and improving auditory comprehension. All voices are recorded for excellent articulation and clarity.

The therapy apps are comprised of articulation videos and are particularly useful for apraxia and some parts of the autism spectrum. The subjects are phonemes; consonant blends; common phrases; letters, numbers and colors; days, months and dates; and oral motor exercises. Users can practice sounds, words and phrases while imitating the close-up video a mouth articulating the words.

The communication apps are Aphasia (male and female versions), Conversational Phrases, Daily Activities, Pain Scale, Dysphagia, and Intensive Care (ICU). The Dysphagia app is intended for patients in skilled nursing facilities where staff may turn over frequently, creating the need to communicate about swallowing needs. The ICU app is intended for patients in acute care or on a ventilator and covers a patient's basic needs in these settings.

The Aphasia app has the additional feature of being customized from the Lingraphica SGD. Users typically use the Lingraphica to take photos and videos, record voices, as well as making use of its core vocabulary and icon set. Users add photos of family members, restaurant orders, personal history and medical issues. The customized communications are transferred to the Aphasia app where they are selected and spoken. Some users use headphones to silently cue their own speech. This is particularly useful for ordering in a restaurant, visiting a doctor or other highly scripted interactions. Phrase Strips and custom-made videos are particularly useful for cueing. Facilities and Aphasia Centers will often purchase a single Lingraphica and use it to customize multiple iPods and iPads owned by patients.

All of the SmallTalk apps are free and are a great way to introduce people with aphasia and apraxia to AAC and SGDs.



Smalltalk Aphasia on an iPod touch.

## OTHER APHASIA APPS

There are very few apps designed for aphasia. Most therapy apps are designed for children, although they are often useful for adults if they don't find them off-putting. However, there are some terrific aphasia apps and many apps that are not designed for people with disabilities can be used therapeutically and for communication.

If a user can use a full blown SGD, then ProLoQuo and TouchChat are good options. They tend to require more retained grammar than many people with aphasia have, but if they work, they provide lots of functionality. The Lingraphica SGD should be available on the Android platform at the time of this article; it provides similar full SGD functionality in a more aphasia-centric form.

SpeakInMotion provides articulation videos that are particularly good for self-cueing for people with apraxia. The system was developed by Darlene Williamson and power-user Winston Lindsley. Darlene founded and runs the Stroke Comeback Center near Washington, DC. They also have a service where users can write a speech of any length and the SpeakInMotion people will custom create an articulation video with scrolling text that enables users to give in-depth presentations.

For users who can type, SpeakIt provides a simple interface for writing and saving phrases and is widely used. For those who

can't and have some speech, Dragon dictation is a popular option.

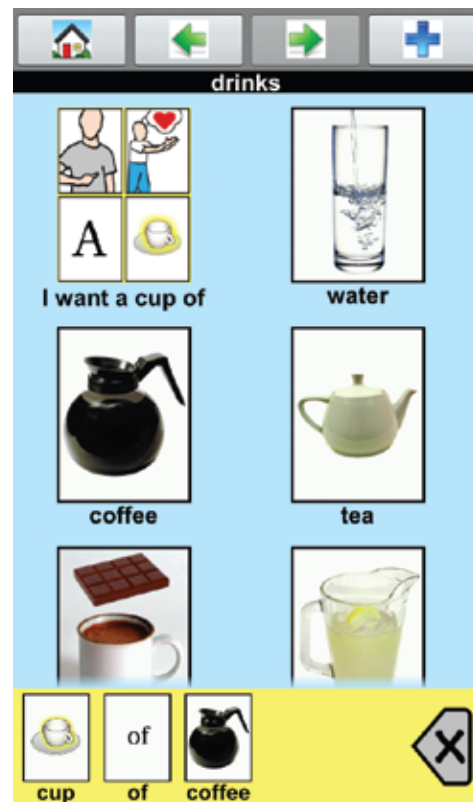
SceneSpeak uses visual scene displays, which have long been effectively used for aphasia. Howard Shane and others did early research in this area; Lingraphica has used scene displays since its inception in the early 90s. More recently, David Beukelman and others have done related research which Dynavox made use of in their visual scene displays. Users can import photos or images, create hot spots and record voices.

## WHAT SOME EXPERTS AND PEOPLE WITH APHASIA ARE DOING

Bill Connors primarily treats adults with aphasia and related disorders and is pioneering the delivery of distance-based speech therapy, now beginning to be known as telerehab. On his Web site, aphasiatoolbox.com, Bill promotes software that follows his SHEAR principle: the software should be Simple to use, have a Human connection, be Effective, be Affordable and be Responsive to client progress. Bill avoids using software that does repetitive drills because it leaves out the human element and does not address spontaneous

conversational speech. When he uses apps, he prefers to use regular apps and make them therapeutic, often working on cognition, which Bill calls "the cognitive underpinnings for aphasia progress." A typical example is the use of the card game app 21&Fun. Bill has a patient learn the game (procedural memory), learn to run the game (tapping, dragging, keyboard skills), learn the rules (logic, deduction), play the game (alternating attention with other activities), discuss how it went (self-assessment), and most important, verbalizing (speech) while playing. The purpose is always to target the mental processes that a client needs to improve. Bill also uses the Talking Tom app for finger dexterity training and the speech mirroring for working on prosody.

Joan Green is a speech-language pathologist in the Washington, DC area. She has made a name for herself as an advocate for low-priced high-tech. In fact, she wrote a book about it, *The Ultimate Guide to Assistive Technology in Special Education: Resources for Education, Intervention and Rehabilitation*, and is working on another, more focused on adults. Joan finds keeping up with all of the new apps overwhelming, so we can all feel better about being over-



Lingraphica Android on a Samsung tablet.

whelmed too. Joan points out that while there are a lot of blogs on kids apps (Moms with Apps, etc.), there are very few reviewing apps for adults. Joan offers a free e-newsletter that highlights her favorite affordable technology treatment solutions. Joan uses a few of the apps mentioned above: Talking Tom, Scene Speak and Dragon. She likes to use Dragon to work on articulation and volume, having the patient speak, using learned strategies in order to have the app type what the client says aloud. There are a number of apps she uses for cognition, such as Color Match by Lumosity, Brain Challenge HD by Gameloft, Basic Sequencing Skills by Nth Fusion and Jungle Coins by Andrew Short. Joan is familiar with drill and practice apps for kids and likes the ones that can be customized. She notes that many adults are put off by child-centric design but customization can sometimes minimize the annoying features. Word Magic (spelling) by Anusen is one she likes to use and, as an example, the "rewards sounds" can be turned off to make it more adult. A few of Joan's other favorite kids apps that can work for adults include iWriteWords (tracing letters on the screen), Artic Pix (articulation with photos), Cookie Doodle (task sequencing), Story Builder (language generation) and First Words Deluxe (reading, spelling).

Joan also likes to make use of standard apps as therapy materials. Joan feels that

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Facebook is “very important” because the material on the site is personal and stimulating. She uses it for naming and asking “wh” questions and if the patient finds Facebook too complex, runs it herself. Google maps is effective for prompting patients to talk about geographic information - where they were born, where their children live, and where they have travelled. Another important category of apps is eReaders. For non-readers, there are Audiobooks and other read-out-loud apps, some of which allow speed control, which can be critical for matching a user’s auditory comprehension. For readers, Joan uses the Kindle, iBooks and other standard eBook readers. She also makes ingenious use of Pandora, which lets a user start with a song and then plays an endless stream of related music. The users respond to each song with a thumbs up/down and describe the music. Studies have shown that focused music listening has a generally stimulating effect on cognition.

Wendy Greenhouse is the Coordinator of the Kean University Institute for Adults Living with Communication Disabilities. She sees the potential for apps, especially for their Tech Group, but notes that they are small part of the program at present. One reason is that the clinic is mostly staffed by first and second semester students who have their hands full with the basics, let alone finding and working with unfamiliar apps. Most apps are brought in by patients themselves, although Wendy has found low awareness of apps on the part of caregivers. The most-used apps are non-language apps, like the McDonalds app that has their menu or the weather channel app for prompting communication on the weather.

Denise McCall runs the SCALE Aphasia Center in Baltimore. Technology is an important focus at the Center and iPads are present in every classroom with a “librarian” (worker or capable client) who helps others with writing, spelling, sequencing or anything else needed to use the tablet. They also have a Lingraphica on-site that they use to customize iPods running the SmallTalk Aphasia app for their “iPod Fun” class. SpeakIt is popular, as is Pictello, which lets users put together photos and voices to tell stories. More often, apps are used that pertain to the topic of a class: the NASA app for a discussion of science; the US News & World Report app for general news or SkyGrid to follow particular topics; and FotoPedia Heritage for travel and foreign culture. Denise uses SoundHound, which is a great music app that identifies songs as you hum or sing them. This does for songs what Dragon does for words.

The three persons with aphasia described below are similar in that the main disability apps they use are the SmallTalk apps (especially customized versions of the Aphasia app) and SpeakIt. They make great use of “regular” apps, sometimes in unique ways.

Joe Greenhouse is a Lingraphica user who suffered an LCVA in 2003. He has verbal apraxia, very limited speech and writing, but can read well. He is very tech-savvy and used to have his own networking business. He uses most of the built-in apps, like Notes, Calendar and Mail. He uses Notes to keep extensive lists of family members and friends and personal history information, like vacation destinations, schools and jobs. Others enter the information for him, and he is very adept at navigating through the unwieldy list structures. He also uses apps from financial institutions to view bank, credit card and investment accounts. He uses Finger Memo to write and draw with his finger (Doodle Buddy and Sketch Pad are also good). Often writing the first few letters can clarify what he is trying to say. He has a saved drawing of intersecting roads to help explain his car accident!

Vahan Khoyan is also a Lingraphica user who had a CVA in 2003. He has both apraxia and aphasia that leave him with limited speech and writing. A former pilot for Eastern Airlines who also had his own charter business, he is also very tech-savvy. Vahan is a fan of SpeakIt, which he uses to record conversational phrases that he uses over

the phone. He also uses it therapeutically to do scrambled sentence exercises, which he can unscramble when he hears the words much more effectively than when he reads them. Since writing is difficult, he uses Cam Card and Cam Scanner to input information on doctors, medical personnel, stores and anyone with a business card. Vahan has a collection of apps that read or speak to him: AudioNews, Talk Mail Pro, Mapquest Audio and Audiobooks. He also has some apps that he uses for drill practice: Multiplication Genius (designed for children) and Miss Spell’s Class (from Dictionary.com).

Berhane Gebrehiwot is a Lingraphica user who had a stroke in 2001. His speech has recovered remarkably over the years. Berhane is from Ethiopia and worked at the U.N. before his stroke. He is much more of a game player than Joe or Vahan and has apps for Scrabble, Uno, Sudoku and Hangman, not to mention, Angry Birds. One of his favorite apps is Fotopedia Heritage, which he uses to view and talk about World Heritage sites. Berhane, Vahan and Joe all have the 3-D Brain app, which they use to understand their aphasia and explain it to others.

## ABOUT THE AUTHOR

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# Smart Inclusion Adventures in the Classroom

By Peggy Roy, Tania Mason and Heather Snider

**W**e had an idea we might be on to something good when one day, two eight-year-old boys came in from playing hard on the yard at recess. One boy looked up at the visual schedule posted in the room to see what was up next in the classroom and exclaimed, “All right! Language!”

This excitement and enthusiasm has been expressed by students and staff alike at Upper Canada District School Board in Ontario, Canada. In 2008-2009, an Upper Canada District School Board (UCDSB) team created Smart Inclusion, an idea

that originated as a method to program for 12 students with severe communication challenges in a combination of regular and system classes within the district. This initiative examined the use of SMART Boards ([www.smarttech.com](http://www.smarttech.com)) with what has historically been thought of as “special needs software,” set within a framework of Universal Design for Learning (UDL), Differentiated Instruction (DI), Aided Language Stimulation, and the Participation Model (PM) to support communication and participation for students with significant communication disabilities and inclusive educational programming. Since then, UCDSB teams have broadened their Universal Design for Learning Toolkits to include other mainstream educational technologies, including iPads, Nintendo DSi and SMART Tables. We continue to monitor implementation and effects of Smart Inclusion on not only our students but on our school staff – including teachers, educational assistants and principals – by using action research principles as more and more classrooms, schools and districts, look to support a program for students with significant disabilities and their typically developing peers.



From left to right: Peggy Roy, Educational Assistant, Tania Mason, Learning Resource Coach, Heather Snider, Classroom Teacher from Glen Tay School, Perth, Ontario Canada

## ABOUT THE AUTHORS

Glen Tay School is a Kindergarten to Grade 8 elementary school located just outside of Perth, Ontario, Canada, about an hour from Ottawa. It is a rural school of about 220 students. The school is one of two schools in the Board chosen to be a Smart Inclusion school.

**PEGGY ROY** has been working as an educational assistant for 15 years in various schools with the Upper Canada District School Board. She has worked mainly with students with Autism and high needs behavior.

**HEATHER SNIDER** has 25 years of experience teaching Kindergarten, Grade 2 and Grade 3. She has her primary and reading specialist qualifications.

**TANIA MASON** is a teacher presently working as a classroom teacher and learning resource coach with the Upper Canada District School Board, working with teachers and students in Kindergarten to Grade 8. Tania has additional qualifications in Reading Recovery and Computers in the Classroom and is a specialist in Special Education. She is one of UCDSB's lead SMART Inclusion teachers at Glen Tay School.

This is our third year of adventuring with Smart Inclusion in the classroom at Glen Tay School. Each year we have tried to build new skills as educators and refine our use of the technology available and our teaching practices in order to meet the needs of all learners in the classroom. This year, we have tried to step out of the way of our students by turning the technology over to them more often, giving them the opportunity to collaborate and create. We have challenged ourselves to create projects that will offer students opportunities to learn and produce work that has real purpose and an authentic audience. We also wanted to continue to look for innovative ways to use technology in the classroom to both engage students and find ways to accommodate their needs. As a means of bringing higher level thinking into story retells, we decided to create an interactive story.

To start this process, the children took a familiar story and retold the main events. To do this, the students used the Story Stage application ([http://education.scholastic.co.uk/story\\_stage](http://education.scholastic.co.uk/story_stage)) on the SMART Table (<http://smarttech.com>), where they were able to read, listen to or watch the story Goldilocks and the Three Bears. Because the application allowed the choice of three modes to make the story available, learners with different reading abilities were able to participate together at the same learning center. Students then worked collaboratively to retell the story using the application's 'create' option. Here they were able to easily drag in characters, objects and settings and then add animation and sound to retell the story. Using a familiar story helps the students concentrate on the retelling skills they are developing.

Looking ahead at the end product, we realized that the children would want to add sound to make it truly interactive. In order to do this, the students needed to learn to use Audacity (<http://audacity.sourceforge.net/>) to create MP3 sound files and then had to learn how to create links to these files in Notebook ([www.smattech.com](http://www.smattech.com)). To do this, we selected a team of "student experts" who met with the Learning Resource Coach to learn the necessary steps. Each day during Literacy time, the SMART Board ([www.smarttech.com](http://www.smarttech.com)) became another station in the classroom. The teacher recorded a question relating to a story read during shared reading or read aloud where the students were asked to identify how one event in the story could have been changed. One of the "student experts" then helped the other students learn to record a response and link it to their photograph on a response page on the SMART Board in Notebook. Our student with severe apraxia was also able to successfully participate. He used his Super Talker



Students share ideas to create idea web in Kidspiration.

(ablenetinc.com) voice output device that was pre-programmed with vocabulary to record his message alongside his peers.

We chose to have the interactive story follow a Choose Your Own Adventure format. The students, therefore, needed an example so we located an iPad app called Decide Your Own Adventure. This app has a number of stories that allow the reader to make choices throughout the story to further the plot. We displayed the story on the SMART Board using our document camera during shared reading. Then later, the students had hands-on time with the iPad ([www.apple.com](http://www.apple.com)) at a Literacy station.

As a means of setting the stage for our own adventure story, the teacher shared the story Little Bear's Christmas by Norbert Landa, during read aloud. In the story, Bertie's friends tell him all about Christmas. Being a bear, he always misses that season because he is hibernating, so he sets an alarm clock to wake him in time for Christmas. It was at this point that we thought the story could go in different directions. The students were put in groups and each group was asked to pick a season that Bertie could wake up in. Their task was to re-write a portion of the story assuming the alarm clock goes off at a different time.

Using laptops in the classroom and Kidspiration ([www.inspiration.com/Kidspiration](http://www.inspiration.com/Kidspiration)), the teams set out to plan their adventures. Each team brainstormed a web of ideas to plan out the plot for their portion of the story. Once the story plan had been approved by the teacher, the students began typing the text for their stories. Some students used WordQ, (<http://www.goqsoftware.com>) word prediction software to help with spelling, others required a scribe. Even with these accommodations, this was a task beyond the capabilities of one of our students with special needs. However, this

student was not excluded from the activity. For this student, we created a bank of pictures in Notebook using the gallery. His task was to retell the beginning of the story by dragging in the pictures and objects he needed for each page to retell the story pictorially.

Once the plot was decided, the groups then set out to design the pictures for the book by creating backgrounds and locating objects and characters to use from the Notebook gallery or the Internet. One student asked about using animations in Notebook. In no time the idea spread like wildfire as the other groups caught on and began using them, too. They also used the skills they had learned earlier in the project to add sounds and conversation links to their pages. One student with severe speech delays was able to participate by adding some of his own recorded words and by choosing sound files from the Internet.

Once the story had been completed, the real excitement began! We contacted two other classes at two different schools in our school board and arranged to share our story with them. Using Adobe Connect (<http://www.adobe.com/products/adobeconnect.html>), we shared out our SMART Board screen onto the SMART Boards in the other classrooms. Students, who were able, read passages, while others showed off the interactive features they had created. Students from the other classes were invited to choose the seasons throughout the story. Hearing the other classes' responses in real time was an instant reward for all of the hard work done by all!

"How did these ideas get started?" asked the classroom teacher as we tried to sort through the beginnings of our journey through this project. It began with a trust placed in us that we were using the Universal Design for Learning Toolkit to do some good things for





Students collaborate at Smart Board using SMART Notebook to create pictures and interactive features for book pages.



Using Adobe Connect, class shared their story with a class at Oxford on Rideau PS. Student in the center is reading into the microphone.

kids in our classrooms. We were given a gift of release time that allowed us to spend a morning together planning how we could best put the technology to use and help meet the curriculum expectations we had chosen.

It started with a collaborative inquiry by a team made up of our principal, a classroom teacher, two learning resource coaches and a trainer from Advanced Presentations. Earlier in the year we had decided, as a team, to narrow the focus of our inquiries to improving reading. The classroom teacher was working next on the reading strategy Determining Important Ideas. As a team, we worked together to plan out how we could include technology to assist and engage students. The true power of this collaboration was the explosion of ideas that were generated by brainstorming and then building on them together.

Through the use of the Participation Model, we have worked to become more aware of how it is necessary to plan ahead for the inclusion of our special needs students. We need to discover the barriers that may exist in the activities we have created for our students and then work as a team to find ways to modify the activity or accommodate needs using any resources we have available that might meet the need so all students can experience success. It is a careful dance of knowing when to step in to help in order to teach, when to have peers assist to build inclusion and when to push for students to try on their own to build independence. It also takes a lot of work to investigate the right

technology and create the activities using various types of software that may help build skills and independence. Time also has to be spent on guiding the other children to interact supportively with one another.

"You've got to be kidding!" was one team member's response to the project when it was first proposed and the expectation was set that all students in the class would participate. Making this happen took a team. Our immediate team consisted of a classroom teacher, an educational assistant and a learning resource coach. We collaborated and made adjustments on a daily basis. We were supported by our colleagues within our building, as well as a system level team of speech and language pathologists, behaviorists, occupational therapists and our information technology team, who we met with less often, but were an integral part of our understanding of the children we work together to serve, and the resources they require.

The members of this team needed to be on the same page in their acceptance of inclusion. They needed to be ready to invest the time it took to learn the technology and different software best suited for each need in the room. It took a lot of extra time in the beginning, but as we became familiar with the technology, it became easier and faster until we got to the point where we started to think, "How can I make this work for my students?" It became a different way of thinking and planning that started to happen automatically.

We are trying to teach differently in the classroom to meet the needs of ALL learners. Although we have a wide range of students with special needs at our school, their needs were not discussed as the focus of the article because our focus is not to make their needs stand out, but rather enabling students with special needs to take their rightful place alongside same-aged peers as part of an inclusive classroom community, "welcoming everyone, all the time, everywhere" (Pat Mirenda).

The authors wish to thank the speech-language services staff, special education resource teachers, learning consultants, and all those teachers and Principals who worked with them. Thanks also to Bridges Canada, Advanced Presentation Products, UCDSB's IT department, SMART Technologies, Cambium Learning Technologies, Nintendo and Dynavox Mayer-Johnson.

For further information about Smart Inclusion visit us at [smartinclusion.wikispaces.com](http://smartinclusion.wikispaces.com) or contact Alexandra Dunn, SLP via e-mail at [Alexandra.dunn@ucdsb.on.ca](mailto:Alexandra.dunn@ucdsb.on.ca)

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# SPOTLIGHT

## HumanWare unveils a new generation of the renowned Brailiant displays

When a market survey revealed that consumers were looking for a Braille reading display that maintained compact, high quality and intuitive-to-use features, yet was affordable to all budgets, HumanWare's engineers responded by designing the new Brailiant display.

### Intelligent ergonomics

The Brailiant display is designed for extensive reading comfort and easy navigation using HumanWare's signature thumb keys. Compact and highly portable, the Brailiant display fits seamlessly in front of a laptop or desktop keyboard for optimum practicality and ease of use. It can also be used with many preferred mobile devices. Built with lightweight, long lasting aluminum housing, the Brailiant will hold up to daily wear and tear.

### Precise and efficient

This new generation of Brailiant displays includes the high quality, sharp and crisp Braille cell technology that users have praised on the BrailleNote Apex. The new Brailiant features a responsive Braille keyboard for input and command keys located on each side of the display. This simple layout facilitates navigation and allows control of the screen reader without shifting hands away from the display.



### Flexibility and choice

- Available in three models: 32, 40 and 80 braille cell displays.
- Compatible with major computer platforms and screen readers.
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- Auto shut-off to preserve battery power

For additional information, visit: <[www.humanware.com/brailiant](http://www.humanware.com/brailiant)>.

## Research-based program teaches students key strategies for listening carefully and remembering details

Super Duper Publications has introduced the fourth edition to its award-winning Webber HearBuilder Software series, HearBuilder Auditory Memory – Strategic Memory Training for Listening ([www.hearbuilder.com](http://www.hearbuilder.com)).

Donna Geffner, Ph.D., CCC-SLP/A, graduate program director for communication sciences and disorders at St. John's University, utilizes this program with her clients. "HearBuilder Auditory Memory is divided well into categories," she states. "I love the closure activities — since we, as clinicians, cannot possibly recreate those stimuli which you have done so well on the [HearBuilder] CD. The preferences with the noise background are fabulous and I love all the options. I

can now train my clients on figure-ground listening skills, as well as on memory. This CD is chock full of activities and levels. What a great tool for auditory training."

With HB Auditory Memory Professional Edition, educators can work with an unlimited number of students, monitor each child's progress, track data, set levels of difficulty, add background noise for particular activities, and print numerous customized reports for each student. HB Auditory Memory Home Edition accommodates one to four players, monitors progress, allows adding background noise at certain advanced levels, and prints basic progress reports.

HB Auditory Memory Professional Edition is available on CD-ROM for Mac and Windows

for \$149.95. Volume discount pricing is also available. The Home Edition sells for \$69.95. The entire HearBuilder Software series includes HearBuilder Phonological Awareness (Sound Awareness for Reading), HearBuilder Following Directions (40 Basic Concepts) and HearBuilder Sequencing (Two- to Six-Step Sequences). Every HearBuilder has both Professional and Home Editions.

For more information and to view research data for all Webber HearBuilder Software, visit [www.hearbuilder.com](http://www.hearbuilder.com). To see the full line of Super Duper products, visit <[www.superduperinc.com](http://www.superduperinc.com)>.

# SPOTLIGHT

## Bookshare and HumanWare simplify access to Bookshare books

HumanWare and Bookshare are pleased to announce a new version of the FREE HumanWare Companion Software that simplifies the process of finding, downloading, and transferring Bookshare books to the Victor Reader Stream digital talking book player.

"Many of our customers appreciate the free HumanWare Companion software with its simple intuitive interface to transfer books and files from their computer to the Stream." Says Gerry Chevalier, Victor Reader Brand Manager at HumanWare. "It seemed only logical to work with Bookshare to add the access to their web service. Now, our Companion

users can not only transfer their Bookshare book to their Stream but they can go online to find and download the book as well."

"We developed an interface that connects to Bookshare from within devices and applications precisely for uses such as this – making it easier to find and read books," says Betsy Beaumon, Vice President and General Manager of the Literacy Program at Benetech. "Bookshare members who use the Companion software with their Stream have direct access to our online book repository of more than 114,000 DAISY digital talking books."

With the latest version, 3.4, of the free HumanWare Companion software, VR Stream users can

now select the Bookshare Web Service from the Online Books menu, log into their Bookshare account, and search by title, author or ISBN. Simply select the desired title from the search results list and the Companion will download it, and transfer the book to the Stream. It couldn't be easier!

Victor Reader Stream users can obtain the HumanWare Companion version 3.4 from: [www.humanware.com/stream\\_software](http://www.humanware.com/stream_software).

Or, users who already have Companion version 3.3 can just use the Check for Updates item of the Help Menu.

To learn more about the popular Victor Reader Stream



DAISY MP3 player and recorder visit: [www.humanware.com/stream](http://www.humanware.com/stream).

For more about Bookshare books and membership visit: [www.bookshare.org](http://www.bookshare.org).

## Informational Web site supports educators and parents of children with autism

TeachTown, Inc., an innovative developer of educational software and video modeling technology, has launched a new, information-packed Web site in support of children with autism and special needs.

Educators and parents can find the latest research on autism, learn best practices of classroom technology, read educator and student stories, download fun activities and watch demos of two TeachTown curriculum-based instructional programs – TeachTown: Basics, computer-aided instruction (CAI) and TeachTown: Social Skills, animated video modeling.

TeachTown programs are set in a colorful and immersive

community where animated characters take students on an educational journey, complete with fun rewards and educational games. Students learn and practice fundamental skills in math, language, communication, behavior and social and emotional development. Assessments and student progress reports guide the development of IEPs (Individual Education Plans) and complement teachers' instruction through consistent delivery of skills measured in standardized tests.

The latest research in the Journal of Pediatrics shows a rise of 17 percent among American children with development disabilities, including autism.

(May 23, 2011 - Washington Post/Bloomberg)

TeachTown CEO, Terry Thoren, said, "As the demand for specialized learning tools in schools grows, we will continue to develop innovative curriculum-based educational programs. We invite anyone interested in these relevant issues about autism to join our community. Together, we'll tackle the challenges that educators and families face and work toward a better learning future, just as Mrs. Maloni has done on behalf of all children."

Check out the new TeachTown Web site at [www.teachtown.com](http://www.teachtown.com) and sign up for the enewsletter featuring more educator, parent and student

videos, along with fun and free activities and resources. Parents and teachers can also download supplemental curriculum tools in the TeachTown Fun Stuff section, a portal that houses visual schedules, character puppets, flashcards, token boards and the much requested character expression pages. Call 800-283-0165 to request a quote or talk with an education specialist.



# 3<sup>rd</sup> Annual Accessing The Artist Within Art Contest and Adapted Art Show

Inside every child is an artist waiting to express themselves. For some kids, accessing and creating art can be a challenge. Assistive technologies can open up a world of possibilities for students to express themselves artistically. It can allow them to access and create art where the limitation is their imagination.

## PURPOSE OF THE ACCESSING THE ARTIST PROJECT

The purpose or mission of this project is to showcase how assistive technologies can empower students to explore the artist within themselves. It will be a venue where children 5-18 can showcase art created using assistive technologies. It will also be a place where children and practitioners can come to get ideas and inspiration to unleash the artists in all kids.

## GOALS OF THE ACCESSING THE ARTIST PROJECT

- Show how current technologies give children access to express themselves through the arts.
- Provide children with disabilities a venue to showcase their abilities.
- Create avenues that will help encourage and inspire children with disabilities to express themselves through the arts.
- Provide information, education and inspiration to other children so they can express themselves through art.
- Network artists and practitioners to support and share best practices in the field.
- Provide an educational component so the efforts can be replicated and expanded.
- Provide an annual venue where art created using assistive technology can be displayed. This year, at least 10 pieces of art will be displayed at the Closing The Gap Conference.

## SUBMITTING A PIECE OF ART

Submissions are currently being accepted by the Anne Carlsen Center of North Dakota and they will be posted as they are received. Learn more at <[www.accessingtheartistwithin.org](http://www.accessingtheartistwithin.org)>.

Requirements: Ages 5-21. Each artist must use some type of assistive technology to create his/her work of art.

## SUBMISSIONS ACCEPTED

- Paintings
- Drawings
- Photography
- Digital Art
- Video
- Film
- Musical Composition

## Do you want to help?

If are interested in being involved in this project and/or if you would like to volunteer to assist with the display at the Closing The Gap Conference, e-mail Mark Coppin at <[mcoppin@me.com](mailto:mcoppin@me.com)>.

A minimum of  
10 pieces of art will  
be selected  
to be shown at


**Closing The Gap**  
October 12-14, 2011




This piece of art was created with a small Black and Decker hand drill, plexi-glass, and a single switch. The artist would put her hand in paint and then hit a switch that would spin the canvas. She would then place her hand on the canvas and paint.



**WordPower 24**



**MultiChat 15**



**"Wow - TouchChat is a heavy hitter in the realm of AAC app's for iPhone and iPad. And the autism community is better because of it".**

Shane Nurnberg  
[autismepicenter.com](http://autismepicenter.com)

[www.silver-kite.com/touchChat](http://www.silver-kite.com/touchChat)

# SPOTLIGHT

## Texthelp Systems announces new suite of Web apps for mobile devices

Texthelp Systems, leading provider of award-winning literacy software solutions, announced an exciting new suite of assistive technology Web apps. The Texthelp Web apps provide support tools that will work within multiple browsers (e.g. Internet Explorer, Safari, Chrome, Firefox) on mobile devices including iPad, iPod Touch, Android tablets, smart phones, PCs and Macs. The first apps in the suite will include: Read&Write Web, Bookshare Reader, Speech and Dictionary.



Read&Write GOLD features they are familiar with along with instant accessibility and mobility with these powerful Web support tools.

### TEXTHELP WEB APPS INCLUDE:

**Read&Write Web** – The Read&Write Web toolbar opens within a browser and interacts with Web content providing: Text-to-Speech to read HTML content aloud with dual color highlighting, Dictionary and

Picture Dictionary to look up unfamiliar words, Translator to translate selected words into multiple languages, Study Skills to highlight and extract important pieces of information, and Fact Finder to research on the Web. Users can also control the speed of the reading voice.

**Bookshare Reader** – The innovative Bookshare Reader allows a user to log in to Bookshare, download or open a Bookshare e-book, read the book aloud with dual color highlighting and access the same support tools found in Read&Write Web.

**Speech App** – Designed for smaller mobile devices, such as phones, Speech allows users to read aloud with color highlighting any typed or pasted text.

**Dictionary App** – Another app meant for smaller devices, Dictionary allows users to look up words and get both text definitions and images.



### PRICING AND AVAILABILITY

The first Web apps will be available in September 2011. The apps will be free of charge for Read&Write GOLD (RWG) unlimited site license customers who have a current Software Maintenance (SMS) agreement. Customers who do not have the latest version of RWG or who do not have a current SMS agreement should call for upgrade or SMS pricing. For more information on the Web apps, call Texthelp at 888-248-0652, e-mail <u.s.info@texthelp.com> or go to <www.texthelp.com>.

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## Ai Squared releases ZoomContacts iPad app

Ai Squared has released ZoomContacts – an app for the iPad and iPad 2! ZoomContacts is the perfect "Large Print" contact application for iPad users who have difficulty seeing the small text on their screen. ZoomContacts uses Apple's internal Contacts database to store and

manage information but presents it using multiple font size and color combination choices. This makes it easier on the eyes for anyone who could use some visual assistance.

ZoomContacts is available now in the iTunes App Store for \$4.99.

# WYNN 6 and PEARL portable learning solution

The Learning Systems Group of Freedom Scientific, Inc., has released the newest version of the industry-leading WYNN software. WYNN 6.0 adds state-of-the-art technology for tools needed in today's fast-paced educational environment. WYNN 6.0 includes support for the revolutionary PEARL portable document camera. PEARL's lightning-fast optical character recognition (OCR) brings instant portable access to printed material. WYNN 6.0 also includes support for educational technology, such as MathML and DAISY books.

Freedom Scientific has partnered with Design Science, the creators of the industry-leading MathPlayer software, to include support for MathML. Design Science develops software used by educators, scientists and publishing professionals, including MathType, Equation Editor in Microsoft Office, MathFlow, MathDaisy and MathPlayer, to communicate on the Web and in print. MathML is the math mark-up language adopted as part of the NIMAS standard. Open any MathML document in WYNN's Web browser to speak the equation or make it bigger so it is easier to read.

## LITERACY SUPPORT TOOLS HELP STRUGGLING STUDENTS PERFORM BETTER

WYNN 6.0 fully integrates all the support capabilities of a powerful literacy software program, including reading, writing, studying and doing research using the Internet. WYNN places all these capabilities in the program, rather than merely superimposing "floating" toolbars on the text. WYNN is also the only software that offers struggling students WebMasking. This patented feature highlights

selected text on a Web page by line, sentence or paragraph while blocking out distracting elements like advertisements. This enables the reader to better focus, read and comprehend text.

## OTHER NEW WYNN 6.0 FEATURES AND BENEFITS INCLUDE:

**Book Search:** Quick access to e-books from Bookshare.org, Gutenberg and others.

**Skim Reading:** Pre-read for content and save time while studying by quickly checking out what's in a document before reading it thoroughly.

**Split View:** See Exact View and Text View simultaneously. This provides easy comparison of the original document and the resulting Text View, which allows visual tailoring to assist with visual processing difficulties.

**Two-tone Exact View:** Use the same custom colors for Exact View as you do in Text View, making your visual preferences universal.

**Crisp Exact View:** Technical advances have made WYNN's Exact View even more crisp and clean, providing an even better user experience.

**Built-in Updater:** You can update WYNN using the new Check for Updates feature. If a new update is available, you can install it from within WYNN. This enables you to get minor updates without uninstalling and installing a new version.

"We are pleased to provide our customers with these new benefits," said Roberta Brosnahan, Vice President and General Manager, Learning Systems Group. She continued, "Moreover, in this world of mobile, on-the-go computing, our unique, portable solution, WYNN with PEARL, provides immediate access to information along with unprecedented convenience."

WYNN is always in color with a clean, uncluttered user interface. WYNN's unique features and benefits were created with input from educators, researchers and individuals with learning difficulties, such as dyslexia. It uses Universal Design for Learning (UDL) principles to enhance success. WYNN was designed to be useful for all users, yet excels at satisfying the needs of learning disabled and struggling students. Everything in WYNN, down to the smallest detail, is built to satisfy those rigorous requirements.

## FOR MORE INFORMATION

For a WYNN 6.0 demo disk and pricing information, contact Freedom Scientific's Learning Systems Group by phone at



(800) 444-4443 or by e-mail at [WYNN@freedomscientific.com](mailto:WYNN@freedomscientific.com). You can also download the demo version at our Web site at [www.freedomscientific.com/lsg/products/demos.asp](http://www.freedomscientific.com/lsg/products/demos.asp).

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# Seeking volunteer speech and language therapists

Imagine if our nonverbal but cognitively able children with cerebral palsy had no means of communicating?

I don't have to imagine. I meet these children three times a year. In regions of economic poverty, around the world. I travel to these regions as part of a volunteer effort to bring mobility to people without.

My name is Gregory Skolaski, I am a wheelchair, seating and positioning guy. I have seen substitutes for mobility devices that are embarrassing to admit exist.

The organizations I volunteer for are United Cerebral Palsy Wheels for Humanity (headquarters in California) and Hope Haven International Ministries (headquarters in Iowa). These organizations utilize staff and

volunteers to collect, refurbish and even manufacture wheelchairs and seated positioning for economically poor regions of the world.

Together, these two organizations have distributed approximately 140,000 wheelchairs in 106 countries over the last 17 years.

These organizations work with partner organizations in the recipient regions to raise funds and organize the distribution. Typically, 200 wheelchairs are shipped via containers on very large ocean 'container ships'. The US Navy also donates shipping space whenever it is possible.

## SPEECH AND LANGUAGE

Many of the children we serve are also nonverbal. I know we could accomplish a great deal, with little effort, for the nonverbal kids I meet.

Our 'first draft' idea is to do webcam evaluations of these children and provide basic communication method recommendations to the families and, in some cases, local therapists. The recommendations for materials need to be easily constructed with locally available and inexpensive materials.

I am hoping to have several speech and language therapists volunteer to work with me on this endeavor. We can do all of our communication by Skype and e-mail, with each other and with the organizations around



the world. The work would require only an hour or two a month. There would be potential opportunities to travel with a wheelchair distribution organization and be directly involved.

If this sort of volunteer work is something you are looking for, please contact me at gskolaski@hotmail.com. Be ready to have your imagination tickled.



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

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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 45.

Inside the next few pages, you will find detailed listings of the 24 all-day preconference workshops, over 200 presentations, exhibitors contracted to date and academic credit/CEU, air travel, hotel and registration information.

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 and hands-on labs, including PC, Mac and iPad labs, 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.

Attend all five days and earn up to

**THREE GRADUATE-LEVEL  
ACADEMIC CREDITS**

**AND UP TO 3.4 AAC  
INSTITUTE CEUS!**

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

**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 - 8:00 am ..... Continental Breakfast

*Sponsored by Dell: Global Education Solutions*

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

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

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

3:00 pm ..... Apple and Candy Break

*Sponsored by Lingraphica - The Aphasia Company*

### 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

3:00 pm ..... Apple and Candy Break

*Sponsored by Lingraphica - The Aphasia Company*

### 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.aacinstitute.org/CEUs](http://www.aacinstitute.org/CEUs).

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

## 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.)



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 - PDD Communication Books (Two-Day Introductory Workshop)**

Linda J. Burkhardt, 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, CCATT, Northampton, MA.

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

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

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, RinnApps, San Diego, 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.

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

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.

## **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**

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.

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

## **Disorder and Related Learning Needs**

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

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

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.

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

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.

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

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.

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

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

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

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.

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

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

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

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

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

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

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, RinnApps, San Diego, 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.

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

Carol Goossens, Ph.D., is a Speech Language Pathologist, Special Educator, Presenter and Author currently in private practice in New York City. She is presently working as a consultant to the Henry Viscardi School and to Abilities!

## **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**

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.

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

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

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

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.

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

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.

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

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.

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

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

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

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.

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

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

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

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

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

Elizabeth (Libby) S. Rush, M.A., CCC-SLP, CPM, is an AAC Consultant in private practice, Durham, NC; Celeste Helling, M.A., CCC-SLP, ATP, is a Speech Language Pathologist, North Carolina Assistive Technology Program, Charlotte, NC; Karen M. Casey, M.A., CCC-SLP, is an AT Consultant, Durham Children's Developmental Services Agency, Durham, NC and Paula Justice, M.S., Ed., is a TVI/AT Team Member, Alamance Burlington School System, Burlington, NC.





## ★ CONFERENCE PRESENTERS For over 28 years, Closing The Gap has been bringing together distinguished leaders in the field to share their knowledge and expertise with others.

**ACOSTA, LILIANA** - HumanWare, USA Inc., Hialeah, FL

**ADAMS, JON** - Switch In Time, Littleton, MA

**APPERT, CHRISTINE** - University of Virginia Children's Hospital, Charlottesville, VA

**ARMSTRONG, JACK** - Wheels On Trails Organization, Duluth, MN

**ASHBY, PATTY** - Southwest Human Development, Washington School District, Phoenix, AZ

**AUGUSTA, CECILLE** - Hawkswood School, Eatontown, NJ

**BACKES, JASON** - District 287, Plymouth, MN

**BAHR, PATRICIA** - Gillette Children's Specialty Healthcare, Mobile Outreach Services, St. Paul, MN

**BAILEY, ANNMARIE** - District 287, Plymouth, MN

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**BOTHUN, CHRISTINE** - Therapy Network, Winona, MN

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**BURD, CASEY** - Hawkswood School, Eatontown, NJ

**BURGSTAHLER, SHERYL** - DO-IT (Disabilities, Opportunities, Internetworking and Technology), University of Washington, Seattle, WA

**BURKHART, LINDA** - Eldersburg, MD

**BUTI, MO** - Chicago Public Schools, Chicago, IL

**BUTTERFIELD, ROXANNE** - Slater Software, Inc., Hot Springs, AR

**BYE, CHRIS** - Thinking Moves, River Falls, WI

**CARL, DIANA** - Houston, TX

**CARROLL, JASON** - Central Kentucky Education Coop, Lexington, KY

**CARTER, RICHARD** - University of Kansas, Lawrence, KS

**COCHRAN, PAULA** - Dept. of Communication Disorders, Truman State University, Kirksville, MO

**COPPIN, MARK** - Anne Carlsen Center for Children, Jamestown, ND

**CORLEY, PAMELA** - The Accendo Initiative, Houston, TX

**CURTIS, TANYA** - AugCom Solutions, LLC, Sheridan, MT

**DAHLQUIST, LORI** - Adaptation, Inc., Sioux Falls, SD

**DAVIS, DAVID** - Florida Instructional Technology Training & Resource Unit, Chieflay, FL

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**DELISI, JENNIE** - Lifeworks Services, Eagan, MN

**DESIDERI, ANGELA** - GACI, San Diego, CA

**DIETRICH, KAREN** - Loudoun County Public Schools, Ashburn, VA

**DOUGLAS, KAREN** - Dept. of Special Education, Illinois State University, Normal, IL

**DUFF, KATIE** - Gillette Children's Specialty Healthcare and Gillette Lifetime Specialty Healthcare Clinic, St. Paul, MN

**DUNN, ALEXANDRA** - Upper Canada District School Board, Oxford on Rideau, ON Canada

**EDMISTER, EVETTE** - Uni-

versity of Northern Iowa, Dept. of Communication Sciences and Disorders, Cedar Falls, IA

**EDYBURN, DAVE** - Dept. of Exceptional Education, University of Wisconsin Milwaukee, Milwaukee WI

**EINGLE, KATHERINE** - Perlman Center at Cincinnati Children's Hospital Medical Center, Cincinnati, OH

**ERICSON, KENDRA** - Tool Factory, Sunderland, VT

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**FEIST, CYNTHIA** - Loudoun County Public Schools, Ashburn, VA

**FEIT, SUZANNE** - Cambium Learning Technologies, Marina Del Ray, CA

**FONNER, KELLY** - Kelly Fonner Consulting, Lake Geneva, WI

**FORE, MERRY** - The Accendo Initiative, Port Aransas, TX

**FOSS, TERRY** - EMC Communication, Inc., Lee's Summit, MO

**GAINES, DIANE** - Laremont School/Special Education District of Lake County, Libertyville, IL

**GALLAGHER, BJ** - The Gallagher Group LLC, Accident, MD

**GARDNER FOX, DALE** -

Hampshire Educational Collaborative CCATT Center, Northampton, MA

**GEORGE, CINDY** - George Mason University, Fairfax, VA

**GERADS SCHMIDT, DIANE** - District 287, Plymouth, MN

**GERKE, ANTHONY** - Monarch Teaching Technologies, Shaker Heights, OH

**GIBSON, JASON** - Kentucky Education Development Corp., Stanford, KY

**GOH, FRED A** - Holland Bloorview Kids Rehabilitation Hospital, Toronto, ON Canada

**GOMORY, ANDREW** - Lingraphica, Princeton, NJ

**GOODWIN, DIANNE** - BlueSky Designs, Inc., Minneapolis, MN

**GOOSSENS, CAROL** - Abilities! Henry Viscardi School, Albertson, NY

**HALL, NERISSA** - University of Massachusetts, Amherst, Amherst, MA

**HAMILTON, SILKE** - Redondo Beach Unified School District/OT Children, Redondo Beach, CA

**HAYNES, LISA** - Lingraphica, Princeton, NJ

**HELLING, CELESTE** - North Carolina Assistive Technology Program, Charlotte, NC

**HENDRICKSON, LYNNE** - Read Naturally, Inc., St. Paul, MN

**HERLIHY, DAN** - Connective Technology Solutions, Inc., Hoosick, NY

**HODGDON, LINDA** - Cornerstone Communication Center, Troy, MI

**HODGES, KELLI** - Dell Global Education, Cedar Park, TX

**HOEHNKE, VALERIE** - University of Wisconsin, Whitewater, Milwaukee, WI

**HOLLAND, BETH** - Super Duper Publications, Greenville, SC

**HOLLINGSWORTH, SHERRY** - Adaptive Solutions, Port Allen, LA

**HOLMAN, BELVA** - Saltillo Corporation, Millersburg, OH

**HUBER, BETH** - Center for Disability Studies in Literacy, Language and Learning, Cedar Falls, IA

**HUDDLESTON, KERI** - Washoe County School District, Reno, NV

**HUNTER, KAREN** - Read Naturally, Inc., St. Paul, MN

**HURTADO, ENID** - DynaVox Mayer-Johnson, San Diego, CA

**HUTH, JOHN** - Tool Factory, Sunderland, VT

**INMAN, NANCY** - Kennedy Krieger Institute, Baltimore, MD

**IYENGAR, SUDHARSAN** - Winona State University, Winona, MN

**JACOBS, JENNIFER** - Social Skill Builder, Leesburg, VA

**JEFFS, TARA** - Loudoun County Public Schools, Ashburn, VA

**JELLISON, HILLARY** - Communicare, LLC, Belchertown, MA

**JOHNSTON, BEN** - Don Johnston Incorporated, Volo, IL

**JONES, DAWN** - Oakland Schools, Waterford, MI

**KALDAHL, BRAD** - Able Computer Graphics/Able Group, Iowa City, IA

**KANGAS, KAREN** - Shamokin, PA

**KEARNS, JACQUI** - Interdisciplinary Human Development Institute, University of Kentucky, Lexington, KY

**KEY, KELLY** - Barrington CUSD 220, Barrington, IL

**KINAS JEROME, MARCI** - George Mason University, Fairfax, VA

**KING COHEN, KRISTINA** - Benetech/Bookshare.org, Palo Alto, CA

**KING DEBAUN, PATI** - Creative Communicating, Park City, UT

**KINGETER, CATHY** - Origin Instruments Corp., Grand Prairie, TX

**KLENK, KRISTEN** - Glendale Elementary School District, Glendale, AZ

**KNOWLTON, EARLE** - University of Kansas, Lawrence, KS

**KOCH, AMY** - Adaptation, Inc., Sioux Falls, SD

**KOESTER, HEIDI** - Koester Performance Research, Ann Arbor, MI

**KORSTEN, JANE** - EMC Communication, Inc., Leawood, KS

**LALK, KATHY** - Special School District of St. Louis County, Town and Country, MO

**LAM, ISABEL** - Holland Bloorview Kids Rehabilitation Hospital, Toronto, ON Canada

**LANGSDALE, TERU** - Washoe County School District, Reno, NV

**LANYI, SHERRY** - Perlman Center at Cincinnati Children's Hospital Medical Center, Cincinnati, OH

**LARIVIERE, JUDY** - Rancho Cordova, CA

**LARSH, KIM** - Mesa Public Schools/Speaking Solutions, Mesa, AZ

**LARSON, MARK** - Marblesoft, LLC, Blaine, MN

**LAUGAVITZ, LYNDIA** - Menomonee Falls School District, Menomonee Falls, WI

**LEOPOLD, MARTIJN** - AssistiveWare, Amsterdam, The Netherlands

**LOUTHER, ALISA** - Virginia Assistive Technology System North, Fairfax, VA

**LOVELL, TRACY** - Enger School, Franklin Park, IL

**LYON, ROBIN** - Blue Valley School District, Overland Park, KS

**MAACK CONNOLLY, SHARON** - Elim Christian School, Palos Heights, IL

**MACOMBER, PHYL T.** - Practical AT Solutions & Make A Difference, Inc., West Windsor, VT

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**MARFILIUS, SCOTT** - Scott Marfilus Consulting, Milton, WI

**MAYO, JAMIE** - University of Michigan Health System, Ann Arbor, MI

**MCBRIDE, DEBBY** - AAC Tech-Connect, Inc., Evergreen, CO

**MCDONALD, TENLEY** - PACER Simon Technology Center, Minneapolis, MN

**MCGRATH, WILLIAM** - HIAT, Montgomery County Public Schools, Bethesda, MD

**MCGRATH, KATE** - Henry Viscardi School, Albertson, NY

**MCINTYRE, SANDY** - Oakland Schools, Summit Campus, Waterford, MI

**MCKAY, MARTIN** - Texthelp Systems, Inc., Woburn, MA

**MCKEOUGH FALLING, EMILY** - George Mason University, Fairfax, VA

**MCNEAR, DONNA** - Humanware, Cambridge, MN

**MCNIFF, MATT** - Educational

Service Unit 5, Beatrice, NE

**MCPHERSON, ROB** - Inclusive TLC, Waxhaw, NC

**MEIER, LOU** - Intel-GE Care Innovations, Roseville, CA

**MILLER, LEORA** - Childserve, Johnston, IA

**MORRISON, DWIGHT** - Wheels On Trails Organization, Duluth, MN

**MUNDL, JENNIFER** - Courage Center, Golden Valley, MN

**MUSSELWHITE, CAROLINE** - AAC Intervention, Litchfield Park, AZ

**NELLIS, JULIET** - iCan Talk Clinics of the AAC Institute, Pittsburgh, PA

**NEUBER, KRISTINE** - George Mason University/Helen A. Keller Institute for Human Disabilities, Fairfax, VA

**NIEMEIJER, DAVID** - AssistiveWare, Amsterdam, The Netherlands

**NIX, KIMBERLY** - Texthelp Systems, Inc., Woburn, MA

**NORTON DARR, SALLY** - Loudoun County Public Schools, Ashburn, VA

**NORWELL, SUSAN** - Buffalo Grove, IL

**NURSE, SHELBY** - Clearwater, FL

**NURSE, THOMAS** - Clearwater, FL

**O'CONNOR, GREG** - Spectronics, East Lismore, New South Wales, Australia

**O'REGAN KLEINERT, JANE** - University of Kentucky, Lexington, KY

**ODOM, JANE** - Prentke Romich Company, Surprise, AZ

**OK, MINWOOK** - University of Texas at Austin, Austin, TX

**PALECEK, MIKE** - InfoCor, Germantown, WI

**PEARSON, BRIAN** - EVAS, Westerly, RI

**PERDIEU, JENNIE** - Blue Valley School District, Overland Park, KS

**PETERS, NICOLE** - Blue Valley School District, Overland Park, KS

**PICA, MONIQUE** - Hawkswood School, Eatontown, NJ

**PLUDWINSKI, ELLIOT** - Judy Lynn Software, Inc., East Brunswick, NJ

**PRATT, BICK** - MyTalk and MyTalktools.com, Onekama, MI

**PRINCIPE, SHARON** - Baltimore City Public School System, Owings Mills, MD

**PUGLIESE, MADALAINE** - Simmons College, Marblehead, MA

**RAINEY, DAWN** - HMS School for Children with Cerebral Palsy, Philadelphia, PA

**REDEPENNING, SUE** - Courage Center, Golden Valley, MN

**RICK, JULIE** - AIMEE Solutions,

Inc., Mundelein, IL

**ROTELLI, LISA** - Adaptive Switch Labs, Inc., Spicewood, TX

**ROTH, BECKY** - New Ability Productions, Juneau, AK

**ROWE, DANA** - Widgeit, Cubbington, Leamington Warwickshire, United Kingdom

**RUSH, ELIZABETH (LIBBY)** - Durham, NC

**SAGSTETTER, MARY** - AbleNet, Inc., Roseville, MN

**SAILERS, ERIC** - RinnApps, San Diego, CA

**SCHERF, ROBERTA** - Thinking Moves, River Falls, WI

**SCHINDLER, CHRISTINA** - Queen Anne's County Public Schools, Centreville, MD

**SCHMITZ, MICHAEL** - The Conover Company, Appleton, WI

**SCHOGLER, BENJAMIN** - Skoogmusic Ltd., Edinburgh, United Kingdom

**SCHOONOVER, JUDITH** - Loudoun County Public Schools, Ashburn, VA

**SCHROEDER, TARA** - Hawkswood School, Eatontown, NJ

**SELIGSON, ROSEMOND** - Rancho Palos Verdes, CA

**SETTLE, DEBORAH** - Special Education District of Lake County, Gages Lake, NY

**SEYKORA, RENEE** - CaDan Computers dba Technology for Education, Eagan, MN

**SHELQUIST, SARAH** - Childserve, Johnston, IA

**SIMONAITIS, JENNIFER** - Barrington CUSD 220 Early Learning Center, Barrington, IL

**SKELLY, BARB** - District 287, Plymouth, MN

**SLATER, JEAN** - Slater Software, Guffey, CO

**SNEERINGER, CORY** - Maricopa Children, DynaVox Mayer-Johnson, Cave Creek, AZ

**SNYDER, PATRICIA** - Henry Viscardi School, Albertson, NY

**SOULIA, MOIRA** - Washoe County School District, Reno, NV

**SPENCER, MAUREEN** - Lexitech, New Orleans, LA

**SRINIVASAN, SRI** - Injini, El Cerrito, CA

**ST. JOHN, JULIANNE** - University of Iowa, Iowa City, IA

**STACHOWIAK, JAMES** - University of Iowa, Iowa City, IA

**STAPLES, AMY** - University of Northern Iowa, Cedar Falls, IA

**STAUGLER, KATHY** - N2Y Inc., Huron, OH

**STOKES, SUSAN** - Fond du Lac, WI

**STORES, DAN** - EquipALife, Clinton, MN

**STUCKEY, DINELL** - Derby, KS

**SUHM, KAREN** - Alexicom Tech, Phoenix, AZ

**SWEENEY, JUDITH** - Onion Mountain Technology, Inc., Canton, CT

**SWEENEY, SEAN** - Newton Public Schools, Newton, MA

**TAMANO, YUICHI** - DynaVox Mayer-Johnson LLC, Brooklyn, NY

**TAYLOR, TAMMY** - SLP Center, Hanson, MA

**TERWILLIGER, ELIZABETH** - Terwilliger Speech Pathology and Technology, Waverly, NY

**TINCHER, JENNIFER** - Perlman Center at Cincinnati Children's Hospital Medical Center, Cincinnati, OH

**TRIDGELL, GLEN** - People with Disabilities for Change, Duluth, MN

**VERDIER, MOLLIE** - Butterfly Therapy Solutions, LLC, Sidney, OH

**VOGT, RANDAL** - Wheels On Trails Organization, Duluth, MN

**WAGNER, DEANNA** - Madison Elementary School District, Phoenix, AZ

**WALLACE, NIGEL** - Inclusive TLC, Waxhaw, NC

**WALSER, PAULA** - CESA 6, Oshkosh, WI

**WALSH, JEAN** - Saltillo Corporation, Black Hawk, CO

**WALZ GARRETT, JENNIFER** - University of Northern Iowa, Dept. Communication Sciences and Disorders, Cedar Falls, IA

**WEILER, DEVON** - Wentzville R-IV School District, Wentzville, MO

**WHITFIELD, KRISTIN** - DynaVox Technologies, Pittsburgh, PA

**WIESE, JOANNA** - University of Iowa, Iowa City, IA

**WILLCOXON, MARILYN S.** - Southwest Human Development, Phoenix, AZ

**WILLIG KRONER, ELIZABETH** - Perlman Center at Cincinnati Children's Hospital Medical Center, Cincinnati, OH

**WILSON, MARY SWEIG** - Laureate Learning Systems, Winooski, VT

**WOLLAK, BARBARA** - Private Consultant, Golden Valley, MN

**WOODBURY, KEITH** - Tobii ATi, Marstons Mills, MA

**WRENCH, KAY** - Oldham Council, Oldham, United Kingdom

**WRIGHT, JESSI** - West Virginia Assistive Technology System/CED, Morgantown, WV

**YATES, ALLISON** - Advanced Multimedia Devices, Inc., Scott, LA

**YERGEAU, DEBORAH** - Crick Software, Westport, CT

**ZABALA, JOY** - CAST, Inc., Lake Jackson, TX





## ★ OVER 200 PRESENTATIONS Wednesday, Thursday and Friday, October 12-14, 2011

### ACCESSIBLE INSTRUCTIONAL MATERIAL

20 Creative Uses for Click N Talk, a Photo App for iPads/iPods

Accessible Science Equipment and Labs

Benchmarks are Not for Sitting!

Children with Complex Needs and a Visual Impairment: Accessing Communication and Learning

Comic Life on Steroids

Early Literacy Tools and Accessibility for Severe and Multiple Disabilities (Two Block Session)

Effects of HearBuilder on Preschool and School-Age Students

Enhancing Learning for Students with Complex Learning Needs

Exploring Accessible Instructional Materials Initiatives Through the Use of Digital Audio Book Players

Free, Fun and Fabulous Tools for Students and Educators

Help for THOSE Classrooms

I See, I Believe: The Art and Power of Video Self-Modeling and PollyMovie Production

I Touch, I Hear, I Talk: iPad Tools of the Trade

Implement AIM at Your School: Hands-On Lab with Bookshare (Two Block Session)

Improving Student Performance with the Intel Reader: A Hands-On Presentation

Introducing Bookstream: Your

e-Book Cloud, their iPads, Laptops, Smartphones

Literacy Lab: Integration of Boardmaker Studio to Enhance Literacy Instruction (Two Block Session)

Make the APPsolute Fit: Select the Right Mobile Device Apps

Making Text Cognitively Accessible for Students with Learning Disabilities

Medialexie Toolbar

Sing a Song of Six Paints

Teen Writer's Group: Making Communication and Writing Fun!

The AIM Navigator: Guiding the Way Through Decision-Making About Accessible Instructional Materials

Tips, Tricks and Strategies for Using Speech Recognition to Increase Productivity

Tools and Strategies for Using Electronic Large-Print Textbooks

Track It YOUR Way with Assistive Technology Tracker Web

Train the Trainer: Boardmaker Studio (Two Block Session)

Universal Design for Art: Low-Tech Options for Adults with Disabilities

Using Read Naturally's Fluency Program with Blind and Visually Impaired Students

Utilizing a Structured Teaching Framework to Support Diverse AAC Learners

Video Modeling and AAC Instruction

We've Got Cause and Effect, Now What?

What You Can Do with Acrobat Pro X

What's in Your AAC Briefcase? (Two Block Session)

### ASSESSMENT

Assessing During Instruction: Measuring REAL Success in Literacy and Communication

Assistive Technology in Special Education: The Role of Occupational Therapy

AT Assessment Strategies for Individuals with Significant Sensory Motor Differences (Two Block Session)

Better Computer Access Solutions Through the Use of Evidence

"But What if the Teachers Won't Do It?" Tips for Successful AT Consultation

Computer and iPad Access: Tools for Equalizing the Playing Field (Two Block Session)

Data Collection for Software Use (Two Block Session)

Developing Evidence-Based Writing Instruction for Students with Disabilities (Two Block Session)

Essential Communication Skills, an Assessment and Intervention Tool for Individuals with Comprehensive Communication Needs

Eye Gaze Technology for Girls with Rett Syndrome: Successful Trials and Implementation

Maximizing Access and Participation Through Flexible Mounting

Mobile Computer Workstation Assists with Therapy Goals

MORE Sensory Processing, Sensory Integration, Seating and Access (Two Block Session)

Reading Assessment for Nonverbal and for Difficult-to-Assess Kiddos (Two Block Session)

Switch Progression: A Road Map

Transition Assessments and Curriculum

Using Compass and KPR Wizards to Enhance Computer Access

Using E-Books to Train Motor Access

Where the Bumps Are: Technology App Issues in Minnesota's Great Outdoors

### AUGMENTATIVE COMMUNICATION

AAC and Switch Makeover: Jump Starting Communication for Students with Significant Disabilities

AAC Evaluations Including Mobile Technology: Questions to Ask

AAC on the iPad: Hands-On with the Latest Proloquo2Go (Two Block Session)

AAC on the iPad: Hands-On with the Latest Proloquo2Go (REPEAT) (Two Block Session)

Access to General Education Curriculum for Static Display Device Users

Active Music Making in the Special Education Classroom

Alexicom Tech: The App Plus More!

Auditory Scanning: We Know It

Can Be Done, But How?

Big Paper, AAC and Alternate Pencils: Writing and Communication

Competent Communication Partners: Essential for AAC Success

Cool Tools for Schools

Counting What Counts: Strategies for Looking at the Results (Two Block Session)

Effectively Using the iPad 2 with Communication Apps: Proloquo2Go, ArtikPix and Pictello

Eye Tracking and Eye Control: What It Is and How to Use It

Hot Apps, Hot Devices: What You'll Want and What You Need!

i-gotta-i-product and i-wanna talk!

In-Depth, Hands-On Exploration of Leading iPad Assistive Technology Apps (Two Block Session)

In-Depth, Hands-On Exploration of Leading iPad Assistive Technology Apps (REPEAT) (Two Block Session)

IntelliTools Extreme: Advanced Features Hands-On!

Livescribe Smartpen: More than a Notebook

Low Tech Communication: Important to Multi-Modality Communication Systems

Million-Dollar Ideas on a Dollar-Store Budget

Mobile Device Access: Increase Independence, Interactions and Instruction

MyTalk Tools: Case Studies From a Speech Therapy/

Special Education Perspective (Two Block Session)

Oakland Schools' Communication Enhancement Project, Year 3: Integrating AAC for Students with Significant Disabilities

Out and About, AAC in the Community: Working with Vendors to Start Your Own Group

Promoting Life Skills Participation for Children Who Use Augmentative and Alternative Communication in a Community-Based Group Program

Prompting: A Cautionary Tale of Use, Misuse and Abuse

Scene & Heard: Using a Visual Scene Display Approach to Facilitate Personal Narrative

SpeechTree: AAC and Language Program for iPad

Team-Based Model for AAC Evaluation

Technological Advances in Early Intervention: iPad-Based Games and AAC

Telephone Independence Using 711 Speech-to-Speech Services with My Speech Disability

The Art and Science of AAC Evaluation

The Early Bird Gets the Worm: Using AAC in Early Intervention

The Foundational Steps of Developing Language Competence for AAC Speakers

The Future of Speech Generating Device Support and Training: Online and Distance-Based

The iPad in Special Education: Now That I Have One, What Do I Do With It? (Two Block Session)

The Power of PODD: From Emergent to Independent Communication (Two Block Session)

The Switch is Not the Activity

The Use of iPod Apps for People with Communication Disorders

TouchChat: The New Communication Solution for iPod touch, iPhone and iPad

Using AAC to Facilitate Speech Development in Early Intervention

Utilizing AAC and Classroom Technology to Increase Participation of Students with Complex Communication Needs and Significant Disabilities in the Regular Curriculum

Visual Scene Displays: Shared Communication Spaces for Supporting Meaningful Interactions

## AUTISM

Develop Reading Fluency with Picture-Assisted Text (Two Block Session)

How iPods, iPads, and iPhones Can Enhance Self-Management Skills for Students with Moderate Cognitive Disabilities

Modeling Works: Claymation for Students with Autism

Navigating the World of Technology to Enhance Skill Development for Students with Autism Spectrum Disorder

Oh Behaaave! Asperger Edition

Organizational Toolbox: Tools and Strategies

Ready, Set, Video!

Seeing = Understanding: Tech Tools to Communicate TO Students with ASD

Self-Regulation for All Populations: Using MeMoves to "Calm the System"

Step-by-Step Dissection of Video Modeling Using Innovative Technology and iSupports to Teach Social Language and Behavior

The Ultimate Classroom Tool: Self-Assess, Monitor, Evaluate and Watch Your Program Grow

Time, Travel and Transition: Using Visual Strategies to Support Successful Participation for Individuals with Autism Spectrum Disorders (Two Block Session)

Using Technology to Build Independence for Students with Disabilities

## COGNITIVE REDEVELOPMENT

Application of SAM to Teach Students with Multiple Impairments to Recognize and Choose Functional Objects

## CURRICULUM DEVELOPMENT / MODIFICATIONS

A Quick-Start Guide Using Boardmaker Studio for Sequenced, Language-Based Instruction

AT Squared: Tech Tools for Math and Science (Two Block Session)

Free and Low-Cost Power Tools for Efficient Structured Teaching

Get Students More Active in Your Teaching

Going Beyond Templates with Boardmaker Studio

Learning Academic Content Through Adapted and Interactive Videos

Links to Content: Mining the Interactive Web to Facilitate Access to Content Areas

Unique Learning System's GPS: A Roadmap to Data Collection for Students with Significant Disabilities

Using Clicker 5 to Enhance Your Curriculum

## DIFFERENTIATED INSTRUCTION

Media Tools for Differentiated Learning

Rett Syndrome: Communication and Learning Strategies (Two Block Session)

Scaffolding the Ladder to Success with Cognitive Rescaling

Smart Inclusion News: Students Use SMART Technology to Deliver a Live News Broadcast

To the Cloud: What That Means for AT in Education

## EARLY CHILDHOOD

## ENVIRONMENTAL CONTROL

Effects of Covert Remote Tele-Cueing on Students' Generalized Social Skill Acquisition in General Classroom Settings

## FUNCTIONAL LIVING SKILLS

Using the iPod/iPad for Functional Independence with Video Modeling

## INCLUSION / COOPERATIVE LEARNING

Assistive Technology That Works in the Classroom

From the NICU to College: Ten Positive Influences That Changed My Life

Where Does Assistive Technology Fit in the 21st Century Classroom?

Writing with Symbols: The Next Generation

## LANGUAGE DEVELOPMENT

Creative Lessons and Simple AT Solutions for Structured Teaching of Social Communication

In-Depth, Hands-On Exploration of Leading Speech Sound and Story Apps for iPad (Two Block Session)

Syntax Mastery for Success in School and Life

## LEARNING STYLES

Read&Write 4 GOLD for Mac: Discover the Newest Solution for Success (Two Block Session)

Web-Based Resources for Students with Learning Disabilities

## LITERACY

25 Easy Ways to Support Reading and Writing with WriteOnline

Co:Writer 6: Word Prediction That's Super Easy, Super Smart!

Poetry Power, From Emergent to Conventional Writing: Learn It/TRY IT! (Two Block Session)

Supporting Linguistic Skills Through iDevices: Cool Tricks with New Applications

## PROFESSIONAL DEVELOPMENT

AT Sharing: A Collaborative Model for Using Online Tools to Build Assistive Technology Capacity

Bytes of Learning: Designing Technology Integration Workshops to Meet the Needs of All Learners

Consultation, Collaboration and Coaching: Strategies for AT Support (Two Block Session)

Make SHIFT Happen: Barrington D220 Did It and so Can YOU!

Mentoring and Assistive Technology: A Model for Implementation in Australian Schools

Overcoming AT Barriers: Professional Development That Works

QIAT Conversations 2011: Leveraging the Quality Indicators for Greatest Impact

## RESEARCH

Special Education Technology Research: What Have We Learned Lately?

## SEATING / POSITIONING / MOBILITY

How to Assess and Then TRAIN Young Children and/or Children Previously Not Considered Candidates for Powered Mobility (Two Block Session)

Product Demonstration

satalight Interactive White Board

## TECHNOLOGY INTEGRATION

A New Generation of Software and Access Technology From Inclusive Technology

Customizing and Selecting Computer Activities to Enhance Instruction for Children with Multiple Challenges and Cortical Visual Impairment

Ditch "Hit-the Switch" and Motivate Switch Users Through Purposeful Software

Help! My Computer Came with Excel ... Now What?

iCan Use an iPad 2! (Two Block Session)

iPad, iPod touch and iPhone as Assistive Technology: Ramp Up Your Knowledge

Same Access, but Different Activity: How Powered Mobility and AAC and Computer Access Can Work Together

Student Response Systems: Using iPods, iPads, Smart Phones, Computers and More!

Therapals.com: An Extraordinary Network for Exceptional Children

Think "Out of the Box" Assistive Technology Solutions

Understanding the iTunes Ecosystem and Practical Use

Video Game Creation (Two Block Session)

What Did They Say? Tips and Tricks for Using the Livescribe Pen as an Assistive Technology Tool

## TRANSITION

Improving the Transition Planning Process: The Top Ten Things Everyone Should Know About Transition and Fostering Independence (Two Block Session)

## UNIVERSAL DESIGN FOR LEARNING

3-D Virtual Worlds and Immersive Learning: Exploring UDL and Engagement

Access for All: Utilizing UDL Software to Support Reading and Writing for ALL Learners

Creating Universally Designed Assignment Calculators

Measuring UDL Implementation

Using Free and Inexpensive Assistive Technology to Implement Universal Design for Learning





## ★ 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. **WIN PRIZES** – Again in 2011, participants will have a chance to win over \$2500 in scavenger hunt prizes!

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|---|--|--|--|
| <ul style="list-style-type: none"> <li>• AAC Institute</li> <li>◆ AAC TechConnect, Inc.</li> <li>• AbleNet</li> <li>• Adaptation, Inc.</li> <li>• Adaptive Solutions</li> <li>• Adaptive Switch Laboratories</li> <li>• Aimee Solutions</li> <li>• Alexicom Tech</li> <li>• AMDi</li> <li>• AssistiveWare</li> <li>• ATE</li> <li>• Attainment Company</li> <li>◆ Augmentative Resources, Inc.</li> <li>• Big Keys Company</li> <li>• BlueSky Designs, Inc.</li> <li>• Bookshare</li> <li>◆ Cadan Computers dba Technology for Education</li> <li>• Cambium Learning Technologiesa</li> </ul> | <ul style="list-style-type: none"> <li>• Care Innovations an Intel • GE Company</li> <li>◆ CJT Mounting</li> <li>• Closing The Gap</li> <li>◆ Cognitopia Software</li> <li>• Conover Company</li> <li>• Creative Communicating</li> <li>◆ Crick Software, Inc.</li> <li>• Daedalus Technologies</li> <li>• DO-IT</li> <li>• Don Johnston, Inc.</li> <li>◆ DynaVox Mayer-Johnson</li> <li>• EnableMart</li> <li>• Fraser</li> <li>• FRS Custom Solutions</li> <li>• HumanWare</li> <li>• Inclusive TLC Special Needs</li> <li>• InfoCor</li> <li>• Judy Lynn Software, Inc</li> <li>• Keith McMillen Instruments</li> </ul> | <ul style="list-style-type: none"> <li>• Laureate Learning Systems, Inc.</li> <li>• LexiaTech</li> <li>◆ Lightspeed Technologies, Inc.</li> <li>• Lingraphica - The Aphasia Company</li> <li>• Logical Choice Technologies</li> <li>◆ Marblesoft - Simtech</li> <li>• ModularHose.com</li> <li>• MyTalk, LLC</li> <li>• N2Y, Inc.</li> <li>• Nasco</li> <li>• Origin Instruments Corp.</li> <li>• Point-and-Read, Inc.</li> <li>• PRC</li> <li>◆ ProxTalker.com, LLC</li> <li>• Quilted Illusions</li> <li>◆ Read Naturally, Inc.</li> <li>◆ RJ Cooper &amp; Associates</li> <li>• Saltillo Corporation</li> </ul> | <ul style="list-style-type: none"> <li>• Sensory Software International Ltd.</li> <li>• Shelton Technologies and Resources</li> <li>◆ Slater Software, Inc.</li> <li>• SmartEd Services</li> <li>• SoftTouch, Inc.</li> <li>• Switch In Time</li> <li>• Talking with Baby</li> <li>• TapSpeak, LLC</li> <li>• tboxapps</li> <li>• Texthelp Systems, Inc.</li> <li>• Thinking Moves</li> <li>• Tobii ATI</li> <li>• Tool Factory</li> <li>◆ Vizzle by Monarch Teaching Technologies, Inc.</li> <li>• Widgit</li> <li>• Words+, Inc.</li> <li>• Writer Learning Systems</li> </ul> |
|---|--|--|--|

**COMMERCIAL EXHIBITS OPEN TO THE PUBLIC FRIDAY, OCTOBER 14, 9:00 AM - 1:30 PM!**



**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> <b>Group Discount - 5 or more</b> <b>Group Discount - 8 or more</b> <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> ( <i>A letter describing your child's disability must accompany registration</i> )				<b>\$275</b>
<b>Full-time Student Rate</b> ( <i>Proof of full-time student status must accompany registration</i> )				<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> ( <i>Some preconference workshops carry an additional fee for materials</i> )	<b>\$275</b>
<b>Tuesday, October 11</b> ( <i>Some preconference workshops carry an additional fee for materials</i> )	<b>\$275</b>
<b>BUNDLED PRICING! Monday and Tuesday Bundle (\$60 savings)</b>	<b>\$490</b>

**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**

DoubleTree by Hilton Hotel Bloomington Minneapolis South (formerly Sheraton Bloomington 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 DoubleTree 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.msppairport.com/](http://www.msppairport.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. A deposit of one night's room rate plus tax is required to reserve a guest room for the Closing The Gap Conference.

**DoubleTree by Hilton Hotel Bloomington**  
(Formerly Sheraton Bloomington 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.)

Complimentary Internet in all guest rooms.

Complimentary airport shuttle service.

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

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.)

Complimentary Internet in all guest rooms.

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"/> <b>Standard Rate</b>	<b>\$415</b>	<b>\$455</b>	<b>\$495</b>	<b>\$525</b>
<input type="checkbox"/> <b>Group Discount - 5 or more</b>	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30
<input type="checkbox"/> <b>Group Discount - 8 or more</b> <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"/> <b>Parent Rate</b> (A letter describing your child's disability must accompany registration)				<b>\$275</b>
<input type="checkbox"/> <b>Full-time Student Rate</b> (Proof of full-time student status must accompany registration)				<b>\$325</b>
<input type="checkbox"/> <b>Presenter Rate</b> (Presentation title: _____)				<b>\$325</b>
<input type="checkbox"/> <b>Exhibitor Rate</b> (Company name and booth number: _____)				<b>\$325</b>

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

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

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

<b>CONFERENCE SCHOLARSHIP</b> (See page 45 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"/> <b>PC-1 Two-day PODD Workshop, Monday and Tuesday, October 10-11</b>	<b>\$490</b>
<input type="checkbox"/> <b>Monday, October 10</b> 1 <sup>st</sup> Choice PC- _____ 2 <sup>nd</sup> Choice PC- _____	<b>\$275</b>
<input type="checkbox"/> <b>Tuesday, October 11</b> 1 <sup>st</sup> Choice PC- _____ 2 <sup>nd</sup> Choice PC- _____	<b>\$275</b>
<input type="checkbox"/> <b>BUNDLED PRICING! Monday and Tuesday Bundle (\$60 savings)</b>	<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.	
<b>MATERIAL FEE(S), IF APPLICABLE</b> (The materials fee equals the cost of the materials provided.)	
PC-1 - \$15 materials fee PC-2 - \$20 materials fee	PC-10- \$75 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  
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\$ \_\_\_\_\_ **TOTAL AMOUNT** (Payment or purchase order must accompany registration.)

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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.



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