

Closing The Gap

FEBRUARY / MARCH, 2013
VOLUME 31 - NUMBER 6

Solutions

RESOURCE DIRECTORY

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

2013
Edition

► PRODUCT GUIDE

- Hardware products
- Software products
- Other AT products

► PRODUCER DIRECTORY

- A guide to nearly 300 manufacturers

► ORGANIZATIONS

- ATA Centers
- State Organizations
- Other Organizations



THE MOST COMPREHENSIVE ASSISTIVE TECHNOLOGY GUIDE AVAILABLE TODAY!

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

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WWW.CLOSINGTHEGAP.COM

31st Annual CONFERENCE

Closing The Gap

October 9-11, 2013

PRECONFERENCE WORKSHOPS:

October 7-8, 2013

MINNEAPOLIS, MINNESOTA

MARK YOUR CALENDAR - PLAN TO ATTEND!

The Closing The Gap Conference is truly more than a conference, it is a network of invaluable resources – teachers, therapists, clinicians, parents, end users and manufacturers – all emphatically working together to change lives with assistive technology. The 31st Annual Closing The Gap Conference promises nothing less than excellence!

Early registration, parent, student, group and other discounted rates are available.

- **PRECONFERENCE WORKSHOPS** Day-long workshops, conducted by nationally recognized leaders in the field, providing in-depth professional skills necessary to successfully implement assistive technology in the lives of persons with disabilities.
- **OVER 200 PRESENTATION HOURS AND HANDS-ON LAB OPPORTUNITIES** Sessions describing and/or demonstrating successful strategies and practical applications of assistive technology for persons of all ages with disabilities.
- **COMMERCIAL EXHIBITS** Extensive exhibition area displaying and demonstrating state-of-the-art assistive technology products and implementation strategies.
- **CEUS AND ACADEMIC CREDIT AVAILABLE!**

Learn more at www.closingthegap.com



\$30 RETURN DISCOUNT

A \$30 "RETURN" DISCOUNT is available to ANY past conference registrant and must be used by **JUNE 30, 2013**.

This discount can be used for any preconference workshops OR conference registration and is **IN ADDITION** to any and all other applicable discounts.

If registering online, you will be required to enter code **RETURN** at checkout.

ONLINE REGISTRATION AVAILABLE APRIL 1, 2013

Conference - Wednesday, Thursday, Friday, October 9-11, 2013 Includes Preview of Exhibits – Tuesday, October 8, 5:30 pm - 8:00 pm

Registration Received	On or Before June 30	July 1 - September 5	September 6 - September 26	September 27 - Onsite
Standard Rate	\$435	\$465	\$505	\$535
Group Discount - 5 or more	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30	Groups 5+ Deduct \$30
Group Discount - 8 or more	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50	Groups 8+ Deduct \$50
<small>All group registrations must be received at the same time.</small>				
Parent Rate (A letter describing your child's disability must accompany registration)				\$275
Full-time Student Rate (Proof of full-time student status must accompany registration)				\$275
Presenter Rate				\$335
Exhibitor Rate				\$335

Single-Day and Exhibit Hall Only Registration	Price
Thursday Only - October 10	\$275
Friday Only - October 11	\$125
Exhibit Hall Only - Tuesday evening through Friday, October 8-11	\$175

Preconference Workshops - Monday and Tuesday, October 7-8, 2013	Price
<small>Includes Preview of Exhibits – Tuesday, October 8, 5:30 pm - 8:00 pm</small>	
Two-day Workshop, Monday and Tuesday, October 7-8	\$475
Monday, October 7	\$275
Tuesday, October 8	\$275
BUNDLED PRICING! Monday and Tuesday Bundle (\$75 savings)	\$475



Closing The Gap

LIVE WEBINARS

Engaging and Interactive! CEUs available for live webinars.

Live webinars will be archived within two months of the date of their first appearance.

Archived webinars included with any online Closing The Gap Solution subscription at no additional fee. Subscription details available on page 185.

Working with Slide Presentation Apps and Web Tools

THURSDAY, FEBRUARY 12, 2013

1:00 PM - 2:30 PM CST

Learn how to use free and inexpensive iPad apps and Web tools to create slide shows as time lines, stories, story books, presentations and more. Learn to use free programs online for creating apps on the iPad for playback.

PRESENTER: DAN HERLIHY

Working with Video on the iPad

MONDAY, FEBRUARY 25, 2013

1:00 PM - 2:30 PM CST

Learn the ins and outs of utilizing and working with video on the iPad, including creating, editing, importing into applications, playing video in a variety of formats and exporting video off the iPads, as well as understanding file formats. Learn how to easily import videos and how to use videos in eBook programs, video editors for iPad, free apps to integrate video and effects and more.

PRESENTER: DAN HERLIHY

Explore your Creative Side on the iPad!

THURSDAY, MARCH 14, 2013

3:00 PM - 4:30 PM CDT

The iPad has become a powerful tool in the classroom for adapting and delivering the curriculum. However, it is just as important that we provide opportunities for students to explore their creative side. This is even more important for students with diverse learning needs. There are thousands of apps that are available that provide students the opportunity

to express themselves creatively. This webinar will explore some of the apps for photography, videography, music, drawing, painting and writing. We will also discuss accessibility features, file sharing and copyright.

PRESENTER: MARK COPPIN

Apps for the iPad with Word Bank and Word Prediction Support

MONDAY, MARCH 25, 2013

10:00 AM - 11:30 AM CDT

This session will covers apps with supports for writing that allow you to create word banks and apps that contain options for word prediction, voice recognition and text-to-speech, as well as options for switch access. Learn which apps allow for adding image and symbol support in word banks, which apps can export word banks for use on other iPads and which apps are a cross-platform program (computer – iPad), allowing you to create on computer for use on both computer and iPad and more.

PRESENTER: DAN HERLIHY

Adapting Classroom Materials for the iPad

TUESDAY, APRIL 16, 2013

1:00 PM - 2:30 PM CDT

The iPad has proven to be a powerful tool in the classroom for students with diverse learning needs. The iPad allows classroom materials to be customized and individualized for each learner. There are a wide variety of apps that provide the opportunity for students to be more independent and successful in the classroom. This webinar will provide an overview of various apps that can be used to customize and adapt classroom

materials. We will cover apps for text-to-speech, voice recognition, OCR (optical character recognition), annotation, classroom response systems and word prediction, as well as others. We will also discuss strategies for adapting classroom materials, third party accessories and file sharing.

PRESENTER: MARK COPPIN

Cool Books for Cool Kids

TUESDAY, APRIL 30, 2013

10:00 AM - 11:30 AM CDT

Students of all abilities should be provided with the opportunity to enjoy and participate in the reading process. Participants in this webinar will discover ways to open doors for students of all ages by adapting reading materials. The iPad has provided professionals with the opportunity to individualize and customize materials for each student. This webinar will demonstrate how to utilize apps to create and adapt books to meet each student's particular needs. Participants will learn about the various apps that are available for creating and providing books for all learners. This webinar will also provide information on accessibility features, device management, file sharing and copyright.

PRESENTER: MARK COPPIN

How to Use iPad Apps for Everyday Classroom Projects & Activities: Step Inside the Classroom & See the Success!

TUESDAY, MAY 7, 2013

3:00 PM - 4:30 PM CDT

Struggling with differentiating instruction to meet Common Core Standards? Looking for results-oriented teaching?

Learn how to creatively use apps to transform everyday classroom projects and basic general ed supports into interactive tools for learning and communicating on the iPad! Take a look at how a classroom teacher jump-started her curriculum teaching to differentiate instruction. See how team members taught true understanding of curriculum content tied to the Common Core Initiative. Go inside a classroom to see how to use these tools and strategies every day for meaningful inclusion by viewing video clips, photo galleries and live app demonstrations.

PRESENTER: PHYL T. MACOMBER

REGISTER YOUR ENTIRE STAFF
+Earn CEUs!

90-Minute, Live Webinar Fees

Number of Individuals	Price Per Person
1 - 4	\$55
5 - 24	\$50
25+	\$45

Don't see a date that works for you?

Contact us to coordinate a webinar for your group or organization!

Closing The Gap

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WEBINAR PRESENTERS:



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



PHYL T. MACOMBER, President of Make A Difference, Inc. and Practical Assistive Technology Solutions and Author of adapted curriculum framework called T.H.E. P.A.C.T.™

Register Online: www.closingthegap.com/store/webinars/

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CONTACT INFORMATION

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Cover photo: Amanda Galbreath, TechnoCamp 2012.
Photo submitted by Anne Carlsen Center, Jamestown, ND.

CALL FOR PARTICIPATION



Closing The Gap's Annual Conference has an international reputation as a leading source for information on innovative applications of assistive technology for persons with disabilities.

The 2013 Conference builds on a tradition of providing a comprehensive examination of the most current uses of technology by persons with disabilities and the professionals who work with them.

Topics will cover a broad spectrum of technology as it is being applied to all disabilities and age groups in education, rehabilitation, vocation and independent living. People with disabilities, special educators, rehabilitation professionals, administrators, service/care

providers, personnel managers, government officials and hardware/software developers will share their experiences and insights at what has become known as the best educational AT conference in North America.

Groups or individuals who wish to participate in Closing The Gap's 2013 Conference should submit their proposals for one-hour and multiple-hour presentations as soon as possible.

SUBMISSION DEADLINE: 2:00 pm Central Daylight Time, Thursday, May 2, 2013.

PROPOSALS

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

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

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

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

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

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

PROCEDURE

ABSTRACT: A 300- to 500-word abstract must accompany the proposal form.

SUMMARY: A separate, 100-word summary must also be submitted for inclusion in the Conference Directory.

PROPOSAL FORM: The proposal form must be completely filled out and returned with the abstract and summary or submitted online.

NOTIFICATIONS

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

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

Presenters will be expected to provide all handouts at the conference. In addition, handouts must be made available to Closing The Gap for posting on Closing The Gap's website.

Selected manuscripts submitted by conference presenters will be published in Closing The Gap Solutions. Guidelines for submitting materials for these proceedings will be sent upon confirmation of presentation acceptance.

REGISTRATION

Presenters may register for the three-day (October 9-11, 2013) conference for \$335 (regular registration is \$465).

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

All-day preconference workshops are scheduled for October 7-8 and cost \$275 for one day or \$475 for two days.

“RETURN” DISCOUNT

A \$30 “return” discount is available to ANY past conference registrant and must be used by June 30, 2013.

This discount can be used for any preconference workshop OR conference registration and is IN ADDITION to any and all other applicable discounts.

If registering online, you will be required to enter and apply code **RETURN** at checkout.

OT + AT = Success

Teaching dressing skills to students in schools



KATHY FOSTER

is employed by the Shenandoah Valley Regional Program For Special Education. She has served Rockingham County Public Schools as a COTA/L for 20+ years and as AT team leader for seven years. She received her ATP certificate in 2007. Her past OT experience includes work in extended care, acute care and rehab facilities.

When teaching dressing skills to students in the schools, there are several factors that lead to success. One of these is repeated practice. This can occur with the help of parents and school staff. Obviously, success will occur more quickly with increased practice. Many classrooms have difficulty incorporating dressing skills into their daily routine.

THE CONSISTENCY FACTOR

Another factor that is even more important is consistency. For a child that has difficulty learning these skills, a change in the instruction method can be very confusing. With shoe ties, for instance, the OT may be teaching the traditional method and parents may be teaching the “bunny ear” method. Classroom staff may have yet another method. Subtle changes in the wording of the directions may also lead to confusion. Often the student is not able to communicate why he/she is confused.

Real life practice helps the child’s perspective of the skill. Practicing buttons on a board on the table is different from buttoning clothing on his/her own body. When possible, it is best to practice skills in their natural environment. We should allow time in the schedule to work on fastening a coat when the student is putting it

on to go outside. This would take some one-on-one intervention, which isn’t always possible.

How to make instruction as consistent as possible, be motivating for the student and fit into a busy schedule was my dilemma while working as an OT assistant in the school system.

With the introduction of the iPad or slates in many classrooms, the problem of consistency was answered. Making a video of the skill (shoe tie, buttoning, joining a zipper), viewed from the child's perspective, allowed the student to have consistent visual instruction, with the ability to turn on or off the accompanying verbal instruction. Each video was broken down into measurable steps. This allowed for reverse chaining if that method of instruction was more appropriate. A data form was created for use by parents and classroom staff to document the dates the skills were worked on and the amount of assistance required, i.e., physical prompts, verbal prompts or are now independent with each step. This makes an IEP goal addressing a self-help skill clearer and progress easier to document. Instead of saying that a student is not able to tie their shoe, we can report that they are able to complete steps one through four independently and require verbal prompts for steps five through eight.

Having the skill in video format on the iPad allowed the student to place it on the floor next to their shoe when working on the shoe tie or on the table in front of them when buttoning.

They can pause the video when needed and replay quickly. We have found that, for some students, turning off the sound allows them to attend to the task with less to process.

For classrooms and/or homes that don't have access to an iPad, iPod or slate, the video can be played on a computer. For those homes without a computer, a flip-book of the steps have been made.

We have students that now request to work on these skills and have some of middle school age that are now accomplishing a skill they had previously worked on without success. Parents are happy to be a part of the process and see the progress their child is making. ■



Step 1



Step 2



Step 3



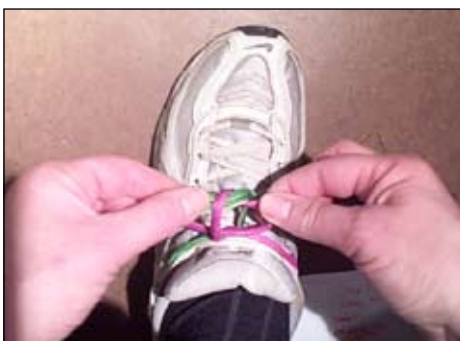
Step 4



Step 5



Step 6



Step 7



Step 9

DISKoveries

New and Noteworthy Apps

By Joan Tanenhaus

With so many new iPad apps becoming available each month, it is getting difficult to keep up with them. Since iTunes does such a good job in presenting the description and screen shots of new apps, I am going to try out a new format – the name of the app, the publisher and just a brief description. If the app seems appropriate for your needs, look it up on iTunes, visit the publisher's website and even check You Tube for more details. In this way, I hope to be able to let you know about more exceptional apps each issue. Feedback is welcome!

** Indicates a lite or free version is available.*

Super Duper / www.superduperinc.com		
StoryMaker	*	Create photo stories or make your own books, cards, pictures, etc. by adding pictures, text, sounds, recordings, etc. Excellent
Core Curriculum Pre K-K Pro	*	100 pairs of core curriculum words and definitions from 4 subject areas, with 4 games that teach and reinforce words; data tracking
Core Curriculum Vocabulary Cards First Grade	*	100 pairs of core curriculum words and definitions from 4 subject areas, with 4 games that teach and reinforce words; data tracking
Core Curriculum Vocabulary Cards Second Grade	*	100 pairs of core curriculum words and definitions from 4 subject areas, with 4 games that teach and reinforce words; data tracking
Core Curriculum Vocabulary Cards Third Grade	*	100 pairs of core curriculum words and definitions from 4 subject areas, with 4 games that teach and reinforce words; data tracking
Webber Photo Articulation Castle	*	3000 photo-words with 24 phonemes to practice in word, phrase and sentence level; flash cards; 6 arcade games; multiple players; data tracking
Ask and Answer Wh Question Cards	*	Who, what, when, where and why illustrated question cards, 4 games for each; reads text aloud; data tracking
Judy Lynn / www.judylynn.com		
Switch Accessible Puzzles	*	Form-board-type puzzles with 2-5 cutouts; large-clear puzzle pieces; use with touch, drag and drop or switch/scanning; data collection
Night & Day / www.nightanddaystudios.com		
Peekaboo People		Touch the elevator to see 13 Busytown characters demonstrating different types of jobs; great for language; errorless
Peekaboo Trick or Treat		14 costumed animated creatures pop up when you touch the front door; hear their names spoken
Batman, Superman, Super Friends		Books to play with; listen to story; decorate pages with stickers that talk; good also for cause and effect for older students; great fun
Peekaboo Presents		Touch the present to find animated toys and hear their names spoken; cause and effect; errorless
Peekaboo Friends	*	Try this - free - to see a sample of all the Peekaboo apps

Mobile Education Store / www.mobile-educationstore.com		
ConversationBuilder Teen		For teenagers; builds multi-exchange conversations in a variety of settings; excellent to help master conversation, asking questions, making observations, changing subject, etc.; 300 conversations in 8 themes; guides the conversation with helpful feedback - record and playback; record keeping. Excellent app as are the others in the series.
Marblesoft / www.marblesoft.com		
Scan and Match		Match pictures using scanning/switch interface; select from 2-4 choices; full color, gray-scale or outline pictures; cause and effect mode also; data tracking
Click to Read Series:		Series of stories using symbols; access with mouse, touch, keyboard or switch; each has 4 excellent activities that help teach symbols and story concepts.
Recycle It!		Click & Read story that teaches concepts related to recycling in the community with 4 different activities
I Can Help		Click & Read story that shows how we can help within school, neighborhood and community with 4 different activities
My Country		Click & Read story that teaches citizenship using facts about our country's capital, the 50 states; national symbols and holidays, with 4 different activities
A Leader is	*	Free app that presents one of the stories with all modes, activities and varied access
Oceanhouse / www.oceanhousemedia.com		
Marvin K. Mooney, Will you Please Go Now!		Dr. Seuss story; professional narration; words are highlighted; autoplay mode too; pages pan and zoom to show the original work of Dr. Seuss
Little Critter - Just Go to Bed		Little Critter book about bedtime; reads aloud page by page, or autoplay; highlights words
Trucks		Byron Barton book; interact with trucks by dragging them to new locations; tap on pictures to find hidden sounds; tap paragraph to hear it read aloud
	*	Oceanhouse has many free apps to try.
I Can Do Apps / www.icandoapps.com		
Emotions		Identify emotions from pictures; identify emotions based on short scenarios
Categories		Identify picture that fits in category; identify 2 out of 4 pictures that go together; identify the one that does NOT belong
Rhyming		Identify rhyme for 2-4 pictures; play memory match with rhyming words
Associations		Find go-togethers from 2-3 choices; identify 2 out of 4 pictures that go together; find one that does NOT belong
Starting Sounds		Listen for starting sounds; which picture starts with ??? Sound; identify pictures starting with same sound; memory match with words that start the same
Guess What?		Follow a series of up to 4 written clues; click to reveal pictures after you have guessed.
Hamaguchi / www.hamaguchiapps.com		
Between The Lines 1 / Between the Lines 2 / Between the Lines Advanced	*	"Listen to voice tracks and identify who said it, watch short videos and identify ""What is he/she thinking?""", watch short videos and ""answer ""What does that mean?"" from a sets of 2-4 choices. Correct auditory processing requires listening, understanding facial expression, body language," perspective-taking, expressions, idioms and slang. Data tracking and other options. BTL 1 and BTL 2 are for elementary-middle school. BTL Advanced is for teens and adults. Outstanding apps for those with social-cognitive weaknesses, brain injuries, autism spectrum disorders, non-verbal learning disorders, Asperger's.
Creative Communicating / www.creativecommunicating.com		
Adapted PlayBook - Hurry, Hurry		Fun interactive book; touch or single switch; reads aloud or sings with repetitive storyline; complete the lines by picking pictures; errorless mode

Code Genesys / www.wordtnt.com		
Word TNT		Excellent for vocabulary for 10 years and up; find 2 words that are similar to given word, 2 words that are different; drag words in order from most to least similar; 3 levels; timed option; stresses understanding of word relationships and the nuances of word meanings.
Synapse / www.pocketslp.com		
One Step Two Step	*	Follow directions by coloring and dragging shapes onto pictures; 25 scenes; 500 different directions; with a game to help generalize skills; data tracking
Describe It (SLP)		Provides framework of audio clues for describing pictures; a study section; 2 games to generalize learning to describe; excellent
Greenhouse / www.greenhousepub.com		
Healthcare Communication App		AAC for communication between Patient and Caregiver – touch icons that speak; can type in words too; Urgent Page with Pain Scale and icons for basic communication of symptoms and needs; other pages are questions, physical and emotional wants and needs, ICU, pediatric page, food page; Spanish/English.
Leripa / www.laramera.se		
Hippi 1		6 cause and effect activities; paint with sound; press and see shapes/pictures; picture book; move images
Hippi 2		6 activities to see details; connect a spoken word to an image; memory training – matching halves of an object, matching patterns
Who's There?		"Cause and effect – touch the picture to see ""who's there;"" clear pictures; fun sounds; music"
TeddyMix		Sort and categorize; sort objects; find the one that does not belong,
Megamix		6 fun activities: match colors, catch falling fruit, put a jigsaw puzzle together, play a musical game, press to uncover pictures/scenes, draw dot-dot pictures
Reading Skills		Listen and touch the picture or word spoken (10 different languages); learn letters; sight words.
TeddyMix2		Build and design – pick a background and add stickers to create your own picture
Attainment / www.attainmentcompany.com		
Attainment's Dollars & Cents		Very comprehensive app with many activities, such as counting coins, naming, matching, sorting, spending money, making change, etc.; US or Canadian currency; voice output to name coins and bills; fully customizable; age appropriate for older students; single switch and scanning option
SymbolSupport		Excellent app!! Automatically adds symbols to text as you type. Can be read aloud with high quality voice with text being highlighted word by word. Email documents as PDFs. Over 6000 symbols, add your own pictures too, You can also symbolize pre-written material.
SymbolSupport Viewer	*	Free viewer for documents created with SymbolSupport
Tactus / www.tactustherapy.com		
Category TherAppy	*	Four activities (Find, Classify, Add One, Exclude), 3 Levels (Concrete Categories, Subcategories, Abstract Categories), Items can be presented as words, pictures or both; can be spoken; about 700 images in 70 categories; data tracking; good for adults and children; excellent app with wide range of use.
Ventura / www.venturaes.com		
Kidioms		An introduction to idioms for kids; graphics to help illustrate the meanings; activities to reinforce the concepts; grades 3 and up.
Plexers		Word puzzles where arrangements of letters or symbols give each puzzle a special meaning; encourages creative thinking and problem solving

Reading Skills 3A		12 high-interest passages about plants, animals, space and technology; 3rd grade level; followed by language and comprehension activities; data tracking
MindTweak		Series of visual challenges that require exercising visual thinking skills
Reading Skills 4A		12 high-interest passages about numbers, math, important discoveries; 4th grade level; followed by language and comprehension activities; data tracking
Animal Alphabet		Introducing the alphabet to preschoolers; letters fade into animal shapes; letters are spoken; ABC Sing-a-Long
Tabletop First Words		Match scrambled letters to spell words that are pictured; words and letters are spoken; 5 categories,
STS Therapy / www.ststtherapy.com		
STS Artic Town L		Practice L sounds and L blends in all positions; match pictures in different scenes and create your own scene; voice recording capability; data collection,
STS House		Follow directions mode (find the...); free play mode; scenes from kitchen, bathroom, bedroom and backyard; great for receptive and expressive language
STS Artic Town S		Practice S sounds and S blends in all positions; match pictures in different scenes and create your own scene; voice recording capability; data collection
Spinlight / www.spinlight.com		
Geography Drive USA		Learn about each state and then play a fun board game about all 50 states; over 750 state and national geography questions

Some new free apps: Sparkabilities; BuzzBack; Lingraphica Talk-Path Series; Magic Voice; Autism Language Learning Lite; Balloon Popper; Keyboard Explorer; We're More Alike Than We are Different; Rocket Speller; Super Duper Data Tracker; Wee Talk Tracker Pro; A Leader Is.

Joan Tanenhaus, M.A., CCC, Speech-Language Pathologist/Assistive Technology Specialist, is Founder and Executive Director of Technology for Language and Learning, Inc., a non-profit organization dedicated to advancing the use of computers and technology with children and adults with Special Needs. ■



SAM is a kit for students with visual and multiple impairments and pre-school children with visual impairments who are just beginning to use symbols.

Games are used to reinforce the meaning of symbols learned in natural environments and to expand the use of symbols to communication contexts like books. Four assessments are provided:

- **Symbol and Referent Analysis:** Common Words
- **Symbol and Referent Analysis:** Academic Vocabulary
- **Environmental Gap Inventory:** Missing Concepts in Common Environments
- **Curriculum-based Gap Inventory:** Early Academic Skills and Basic Concepts

<http://shop.aph.org>



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TOP TEN

TECHNOLOGY TOOLS to Support Students in Reading



KINDY SEGOVIA, OTR, is currently the Assistive Technology Coordinator at Kent Intermediate School District, Grand Rapids, Michigan. She has worked as an occupational therapist in both schools and pediatric rehabilitation for over 25 years. She has provided educational training for teachers, parents and administrators over the past 15 years with a focus on adapting curriculum, classroom accommodations and integrating technology into instruction. She is also an adjunct professor at Grand Valley State University.

It is difficult to argue with the concept that reading is one of the most important skills our students have to learn. Reading is necessary for access to all other content areas, including math. Even in our growing digital world, reading is key to accessing increasingly large volumes of data and information. As students are learning to read, targeted skill areas are generally identified as:

- Phonemic Awareness
- Phonics
- Vocabulary
- Comprehension
- Fluency

However, as many students progress from “learning to read” to “reading to learn,” struggles increase, along with frustration and a risk of failure. Barriers may involve:

- poor foundation of background knowledge and understanding of embedded vocabulary
- varied learning styles, such as auditory and kinesthetic
- lack of automaticity as text complexity increases, offers fewer contextual clues and is less predictable
- lack of ability to read strategically, organize the content, make connections or judgements, understand language rules, find similarities, key vocabulary, etc.
- need for longer processing time, which can result in running out of time to deal with the increasing quantity of material and information

These barriers to success are a problem for many students with disabilities, students for whom English is not their primary language, and struggling or at risk learners.

Providing supports as assistive technology or as part of the school environment within the framework of Universal Design for Learning can be the bridge for student access. Utilization of assistive technology to access the content in a meaningful, successful and increasingly independent manner can also improve motivation, retention, attendance and attainment.

"...if all students are to achieve a given educational standard, then time and tools should vary to allow for differences in learning. If time is to be held constant and traditional instruction has generally failed to produce acceptable levels of academic performance, the only other viable options for enhancing performance are to provide cognitive supports and appropriate technology tools."(Edyburn, 2006)

Determining the appropriate tools for each student and situation requires a thoughtful and deliberate decision-making process. Utilization of the SETT framework (Joy Zabala) can guide and direct the selection of reading supports. This process of consideration should not only include information about the student, environment and tasks, but also surrounding factors, such as who is part of the student's learning team, what tools are already available within the environment, necessary training for the student and others supporting implementation, etc.

Determination of the tools should be an ongoing, fluid process, changing as the task, environment or situation changes. Data collection is an important component of this process and will aid in ongoing decision-making. Within this process, several free and low cost tools and strategies have repeatedly risen to the top of our "go to" list of reading supports. Here are our Top 10!"

NUMBER ONE

Low Tech Tools available at the student's fingertips are a great starting point, are low cost and easy to use for all ages.

The following are available from Onion Mountain Technology:

- Highlighter Tape (Photo 1) (\$3.75)
- EZC Reading Guides (Photo 2) (\$2.00)
- Erasable Highlighters (Photo 3) (\$2.90)
- Franklin Speaking Dictionary or Speller (Photo 4) (\$59.95)

NUMBER TWO

Picture Supported Text can provide students with contextual and vocabulary clues:

- Boardmaker and PixWriter software programs allow you to create your own text supplemented with pictures. Find existing free materials using either of these programs through the Boardmaker Share site (<http://www.boardmakershare.com>) or www.slatersoftware.com.
- Online resources offer free picture support, vocabulary or content. Harcourt Talking Dictionary provides pictures, audio and use of vocabulary in a sentence (<http://www.harcourt-school.com/glossary/esl>). SymbolWorld also free, provides picture supported text in the areas of current events, science, sports, functional tasks, etc. (<http://www.symbolworld.org>).

NUMBER THREE

Text-to-Speech offers auditory support for print text in a more independent manner than an adult reader. Text-to-speech (TTS) can be a lifelong tool for many as they learn to access text digitally:

- Several free options are available for download or use online, including NaturalReader with a very user-friendly floating toolbar (<http://www.naturalreaders.com>) Read The Words has free and for-a-fee options, allowing you to quickly create audio files from text (<http://readthewords.com>), Balabolka also allows free creation of audio files from text (<http://www.cross-plus-a.com/balabolka.htm>).
- Text-to-speech is also built in to many of our existing programs and operating systems. Adobe Reader has a Read Aloud feature that will read most PDF documents. Microsoft Word and other Office products have text-to-speech options, and Windows and Macintosh have TTS built into their operating systems. You can find information for accessing these in the Help menus of each.

NUMBER FOUR

Wikipedia's Simple English option offers simplified access to topic areas and content and can be a first step in introducing a struggling reader to a subject:

- Choose "Simple English" from the language menu in the left column of a Wikipedia page. Simple English offers content with fewer words and simpler grammar than traditional content. This can be helpful for struggling readers or those with English as a second language. (<http://en.wikipedia.org>)

NUMBER FIVE

Free Audio Books can support reading at all levels and can often be downloaded for placement on an MP3 player, CD or other portable device:

- Several online resources provide access to public domain audio books at no cost. These sites offer books read by volunteers:



Photo 1 - Highlighter Tape: multi-colored and removeable.



Photo 2 - EZC Reading Guides highlight individual lines of text



Photo 3 - Erasable Highlighter: allows for flexible highlighting of critical information

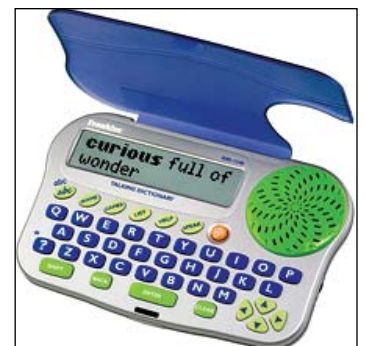


Photo 4 - Franklin Children's Talking Dictionary provides audio support for key words and definitions.

- Lit2Go (<http://etc.usf.edu/lit2go>) texts can be read within your browser, while viewing the corresponding print.
- Books Should Be Free (<http://www.booksshouldbefree.com>) also allows for downloads or streaming of audio within a browser.
- Utilize local volunteers to read aloud and create relevant audio books for your students - older students can record for younger students, drama or honor society students can record audio books, poems and stories, parent or grandparent volunteers, etc.

NUMBER SIX

Digital Fiction and Literature accessed on a computer or other device can open up auditory access, as well as other multimedia features: (Photo 5)

Several free sites offer Web-based access to fiction, poetry, short stories, etc. for all grade levels.

- StoryLine Online - Screen Actor's Guild members narrate video stories of popular titles (<http://www.storylineonline.net>)
- Children's Storybooks Online - illustrated children's books for all ages (<http://www.magickeys.com/books>)
- Browser Books - Children's books created by children, including audio vocabulary support (<http://staff.prairiesouth.ca/~cassidy.kathy/browserbooks/index.htm#>)
- Giggle Poetry - hundreds of poems created by students (<http://www.giggle-poetry.com>)
- Signed Stories - books presented in video format, accompanied by narration and sign language (<http://www.signedstories.com>)

NUMBER SEVEN

Digital Text Supporting Curriculum and Content can replace or supplement textbooks and other print materials for social studies, science, math and related subject areas (Photo 6).

Several open-source sites allow for digital text with multimedia supports for learning:

- HippoCampus provides free multimedia content for secondary students, primarily in math, science and social studies (<http://www.hippocampus.org/>).
- CK-12 provides free learning content in a variety of formats supporting STEM courses and topics, K-12 (<http://www.ck12.org/>).

- Shmoop offers a variety of content in a variety of formats. Pair the digital text with text-to-speech for enhanced reading access. And, check out the "Why should I care?" or "Real Life" sections (<http://www.shmoop.com>).

NUMBER EIGHT

Bookshare is an accessible online library with over 170,000 titles, free to those with print disabilities. Books can be downloaded and read aloud on a computer, utilizing either of two free software options. This resource contains fiction, textbooks, periodicals and other text to support students in the curriculum. (<https://www.bookshare.org/>). Bookshare is also available on a student's iPad through their Read2Go app (\$19.99 in iTunes) - a seamless way to download and hear books read aloud.

NUMBER NINE

AnyBook Reader (Photo 7) is designed as an oversized "pen" that uses a special optical reader, built into the tip, to read unique codes embedded in special stickers. Stickers are used to record your voice onto anything a student may need to hear. They can be adhered to books, flashcards, tests and quizzes, study materials, etc. Once a recorded sticker is placed, the student can use the AnyBook Reader to listen, making this a terrific mobile, customized auditory support option. (<http://www.anybookreader.com>).

NUMBER TEN

Livescribe Smartpen (Photo 8) is an ingenious pen (called the Echo or the Sky) with an embedded computer and audio recorder. When used in conjunction with special digitized paper, it records what a student writes or draws and synchronizes it with the audio that has been recorded. While the Smartpen can be used individually by students for note-taking, educators are finding wonderful applications for creation of audio materials for students to support studying, reading and listening, test and quiz taking, and much more. (<http://www.livescribe.com>).

Many students receiving special education services can benefit from accommodations, modifications and supports for reading to be able to make progress within the curriculum. Incorporation of some of these tools, and others, that provide visual support, auditory input or scaffolded content can



Photo 5 - Several websites offer digital and auditory access to fiction, literature and poetry.



Photo 6 - Several online websites offer multimedia access to text and content supporting curriculum.



Photo 7 - The AnyBook Reader from Franklin can make any book or print text talk

offer students the ability to access text and information and make that progress. Often, as students with disabilities utilize tools and strategies as assistive technology, educators realize that many other students who are struggling can benefit from the same tools. Over time, we have seen these tools become a part of the classroom and school environment for use by all.

"Technologies that a student with learning disabilities might have previously used, and which would have been considered an assistive technology, are increasingly coming packaged as something that everyone is using - a word processor with a spell checker, a portable MP3 player with an audio book on the hard drive, a PDA or a talking pocket dictionary. None of those are going to be marketed specifically as AT, yet each of those is a conveyance for some type of assistive technology." Skip Stahl

RESOURCES:

Mayer Johnson, Inc., <http://www.mayer-johnson.com>, Board-maker Software - \$399

Suncastle Technology, LLC <http://www.suncastletech.com>, PixWriter Software - \$99

Franklin Electronic Publishers, <http://www.anybookreader.com>, AnyBook Reader \$59.99 - \$99.99

Livescribe, Inc., <http://www.livescribe.com>, Livescribe Echo or Sky - \$89.95-\$149.95

REFERENCES:

Assistive Technology Solutions for Reading Success developed by the Georgia Project for Assistive Technology. Permission to Photo



Photo 8 - Livescribe Smartpen can pair text with synchronized audio.

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DONNA WAKEFIELD, PhD, is an assistant professor in the Department of Special Education. Her work focuses on children with exceptional learning needs, and she has presented and published work on adapting assessment instruments and literacy tools and the portrayal of individuals with special needs in children's and young adult literature. Grand Valley State University.

THE WRITING **process** apps for writing

iPads are commonplace tools that many students use daily

In classrooms, iPads stimulate and engage students in the learning process. They enhance instruction by making it personal. They increase achievement and motivation. iPads are devices that can be used for differentiating instruction for diverse learners and accommodate the multiple learning styles of students. iPads can be taken anywhere and thus expand learning beyond the classroom.



With over one million available, there are apps for everything. When specifically looking at apps for writing, there are apps that can be used for and to enhance the writing.

PREWRITING - THINK

This is the planning and outlining phase of the writing process. Prewriting is the concept of thinking about a topic. This is where students brainstorm, research, gather and outline ideas, often using diagrams for mapping out their thoughts. Students can use charts, story webs and graphic organizers to help them develop a word list for writing, decide the type of writing and audience and determine the purpose for writing. Determining resources is also a part of this step. These should be recorded with all of the information. Older students need to develop a working thesis statement.

Prewriting can be done with graphic organizers, lists and charts in order to organize thoughts.

APPS FOR PREWRITING

Popplet (Free/\$4.99) Popplet is a great simple app for building detailed and easily customized mind maps. Popplet is an easy-to-use mind-mapping tool. This app allows students to use a combination of text, drawings and photos. Popplets can be shared and developed in collaboration with others. Students can create up to five Popplets for free.



MindMeister (Free) This is a simple mind-mapping tool. Students can create, share and collaboratively edit unlimited mind maps and folders. Students can sync maps and folders with a free online account. They can also add icons, colors and styles and map themes, images, notes, links and attachments. Maps can be exported to word



processing apps, as well as in RTF, PDF and PNG formats.

Inspiration (\$9.99) Students can create diagrams, maps and organizers that help them brainstorm, plan and organize writing. Students can personalize their maps with images, color, shape, arrow style and backgrounds. They can also use images from the Web or the iPad camera.



Maps can be transformed into outlines that export for writing. The app includes dozens of templates. Students can share files with other apps on their iPad, such as Pages, and with other iPads using Dropbox or iTunes.

DRAFTING - WRITE

Students create their initial composition by writing down main points and all their ideas to express a particular idea or present an argument. The students quickly record their thoughts and write without major attention to punctuation, grammar or neatness. The purpose is for the students to focus on their ideas and get them on paper without the distraction or fear of making mistakes in grammar, capitalization, punctuation or paragraph structure. However, the audience and purpose do need to be finalized.

APPS FOR DRAFTING/WRITING

Pages (\$9.99) Pages is a complete word processing program developed specifically for the iPad, iPhone, and iPod touch. Documents can be created and edited in Pages. Pages automatically saves documents as changes are made. Documents can be saved as a Pages document, a Word document or a PDF. Documents can be saved to iCloud and Dropbox, as well as other cloud storage sites.



Google Drive (formerly Google Docs, Free) This is a Web-based office suite offered by Google. Students can create and edit documents online while collaborating in real-time with other users. Google Drive offers word processing, spreadsheet and presentation options.



The writing process has been identified and used in teaching writing since the 1970s. The writing process consists of five stages, including pre-writing, composing, editing and sharing final writing projects.

Abilipad (\$19.99) This robust app offers customizable keyboards, word prediction, text to speech, voice recording and picture support. The Keyboard Editor is designed so that it is easy and fast to create customized keyboards. The adaptive notepad provides word prediction, text-to-speech, customizable text style (font, size and color) and background color. Students can use images from the image library or use their own pictures. When using text-to-speech, words are highlighted as they are spoken and the rate can be adjusted.



IAWriter (\$1.99) A simple, focused word processing app. Sentences that are not currently be worked on can fade to gray while the current sentence is in a blue font. An additional row on the keyboard allows students to move between and within words with arrow keys.



REVISING - MAKE IT BETTER

While in the Revising Stage, students are reworking the organization and details of their writing to improve it. Students are also also trying to enhance their writing on their own. At this point in the process, students review their work, modify their writing and reorganize their work by rearranging, adding or deleting content, and by making the tone, style and content appropriate for the intended audience. The goal of this stage of the writing process is to improve the draft, as the rough draft usually contains basic ideas and information that is not quite organized.

EDITING - MAKE IT CORRECT

The Editing Stage finds students reviewing and correcting spelling, grammar, punctuation and capitalization and working with the teacher and/or peers to correct all mistakes in spelling, grammar, punctuation and capitalization. At this point in the writing process, writers proofread and correct errors in grammar and mechanics and edit to improve style and clarity. Having another writer's feedback in this stage is helpful. The purpose of this step is to help the student produce a final draft that is ready to be published.





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EDITING, REVISING, AND REFERENCE APPS

Dictionary (Free) A complete dictionary and thesaurus with over 2,000,000 words, including definitions, synonyms, antonyms, word origin and history. The app has a voice-activated definition search that makes it easier for students who don't know how to spell the word they are looking for, as well as audio pronunciation of words. The app works offline, no Internet connection is needed for most content.



WordWeb (Free) This app is an English dictionary and thesaurus. It includes spelling suggestions, definitions, usage examples, synonyms, and related words. The definition, synonyms and antonyms of any given word can be retrieved without requiring you to go online.



Kids Picture Dictionary (Free) A simple app that provides context for a variety of words using photos with verbal and written sentences for each. Multiple words and photos are provided for each letter by touching the screen. There is also a recording feature that enables students to make up their own sentence for each word.



PUBLISHING

SHARE THE FINISHED PRODUCT

In this last step of the writing process, the final writing is shared with others. Sharing can be accomplished in a variety of ways. The written piece is prepared in final form, including illustrations. The students share their writing with others. This is a time to celebrate!

APPS FOR PUBLISHING

Picturebook: School Edition (\$1.99) This app is for creating illustrated stories by entering text and adding pictures from an included library of 250 images that is divided into 12 sets, including everyday, school, dinosaurs, farm, ninjas and pirates. The app also has the ability to import photos from the device's library, providing the student with a literally endless supply of story creation possibilities. There are no ads and no in-app purchases.



Creative Book Builder (\$3.99) This app enables students to create, edit and publish ebooks. Students can add images, sound clips, video clips, Dropbox files and Web links right onto the pages of their book. Students can convert multiple documents from Google Drive into chapters at one time, as well as import text, photos, music, videos, EPUB from Dropbox, and Google Drive. All published ebooks can be read by any ePub reader, including iBooks, and shared with others. The epub document has the advantage that all of the media will be preserved and available for readers to interact with when the final product is published, which is not an option with PDF documents.



Comic Life (\$7.99) Students can take their own pictures to create digital comic books. Templates are provided that map out all the comic panels and students add their pictures. Students can then edit the images, add captions and speech bubbles and insert special icons and graphics. Documents are saved automatically as changes are made. When done, users can share their personalized comic books by printing to a connected wireless printer, read the comics with the built in e-reader or share the comics on Twitter, Facebook and email.



Puppet Pals (Free - \$2.99) This app offers an easy way for kids to create and record their own animated short stories. Students pick out their actors and backdrops, drag them onto the stage and tap record. The movements and audio are recorded in real time for playback later. This is a great app for storyboarding, character writing, speaking and listening.



StoryBuddy 2 (\$6.99) Students can create stories with drawings, photos, text and audio recording. They can draw directly on the iPad's screen with their finger as they create their very own picture book. Students can import images from the photo album. When finished, they can flip through the pages of the story like an actual book, while listening to narration in their own voice. Stories can be printed wirelessly through AirPrint, emailed, sent to iBooks and accessed through iTunes file sharing.



There are many more apps for writing available in the App Store. To find more, go to the Apps for Learning to Write collection that can be found at <http://itunes.apple.com/WebObjects/MZStore.woa/viewMultiRoom?fcId=451906568&s=143441&mt=8>.

The iPad is a great tool for the classroom as it can be used at a variety of age and skill levels. The iPad can accommodate a variety of learning needs and is a valuable tool for differentiating curriculum for all students. For the entire writing process, from pre-writing to publishing the finished product, "there's an app for that." ■

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start^{to} FINISH

Bring the Joy of Reading to Your Struggling Readers with Start-to-Finish Books

MARY ANN MCGINN has worked in the field of special education for over thirty years. She has been a classroom teacher for students with multiple disabilities, an Inclusion Facilitator, Technology and Curriculum Trainings Specialist, and is currently the Technology Coordinator for the Northwest Suburban Special Education Organization in Mt. Prospect, IL. She has presented at local, state and national conferences on assistive technology.



PAM GUIO has been teaching in the field of special education for over twenty years. She has been a classroom teacher for students with multiple disabilities, an Inclusion Facilitator, an Assistive Technology Facilitator, and is currently a Curriculum and Technology Training Specialist for the Northwest Suburban Special Education Organization in Mt. Prospect, IL. She has presented at local, state and national conferences on assistive technology.



JOAN OBIAL has been teaching in the field of special education teacher for over twenty years. She has been a classroom teacher for students with severe cognitive disabilities and autism. She is currently on the Autism Team and is one of the Curriculum and Technology Training Specialists for the Northwest Suburban Special Education Organization in Mt. Prospect, IL. She has presented at local and national conferences on assistive technology.



We know students who struggle with reading need time to read.

All the drill and practice to improve skills would be in vain if we did not provide a way for students to read books. It is well documented that those that read, get better at reading (Stanovich, 1986 “Matthew Effect”). When children fail at reading, they begin to dislike reading and read less, which continues them on the cycle of failure. They fall further behind in reading, writing, vocabulary and general knowledge.

Our goal was to put the joy back into reading, and this was accomplished by providing additional interventions using Start-to-Finish books from Don Johnston Inc.

The Northwest Suburban Special Education Organization is a cooperative between eight school districts in the northwest suburbs of Chicago and serves students with a wide range of disabilities. Many of our students struggle with reading and have deficits in decoding, fluency and comprehension. Students who struggle with reading are often taught using direct instruction remediation programs that focus on discrete skill acquisition. These programs teach the necessary skills to be successful in reading, but struggling students don't often get the chance to read novels or chapter books. We wanted to provide quality age-appropriate books for struggling readers that they could read for enjoyment.

As part of the instructional technology team, we helped provide support to classrooms and staff incorporating these books into the curriculum and

in our RTI triangle as interventions for struggling students. We helped teachers integrate Start-To-Finish books into the curriculum in a variety of ways, including independent reading, novel studies, author studies, and P.O.W.E.R. Hour – Positive Outcomes When Everyone Reads.

In order to accomplish our goal, we needed to get enough copies of a variety of titles to provide teachers with classroom sets and to allow students to have a choice for independent reading. We also needed to offer professional development to demonstrate features and the data collection tools.

The Start-to-Finish library has been around for many years. We believe they are a tried and true method to provide students with quality text so that they will find success in reading. Our teachers like them because they are easy to implement and they provide data on student progress. Our students like them because they have engaging stories and are easy to read. The Start-to-Finish novels are high interest books that are written with a low readability level using considerate text. The authors of the books, Jerry Stemach and Gail Portnuff Venable, suggest six markers for considerate text in their article, *Inconsiderate Text, A Struggling Students Nightmare*:

Mature story themes that “connect” with student’s maturity level

Engagement so that books are relevant and compelling

Considerate text limits the density of new vocabulary and introduces new words, new meanings of old words and idioms carefully

Considerate text assumes little prior knowledge and anchors the reader using familiar examples and analogies and, when appropriate, builds mental models by providing considerate photos, illustrations, maps and other graphics that are properly labeled and captioned

Considerate text simplifies sentence structure, but makes the logical connections between ideas clear. It does not use short, choppy sentences

Adding technology can make the text even more effective. An audio CD or MP3 file can add human-recorded, digitized speech to model phrasing, rate, intonation and stress, irony, sarcasm, humor and the pronunciations of new names and unfamiliar words. A computer book can display on-screen text that is highlighted as it is read.

The books are provided in three formats, which include paperback book, audio book and computer book. A new online version has recently been released and makes books accessible from wherever you have Internet connection. Books can even be read on the iPad!

The books are written in two readability levels:

The Gold books are written at second- to third-grade-level readability with a fifth- to 12th-grade interest level.

The Gold books have the following features:

- Opportunity for students with lower skills to have a literacy experience with full support of the computer book
- Syntax and vocabulary of conversational speech
- High-frequency and topic-specific vocabulary
- Careful introduction of unfamiliar vocabulary and idioms
- Limited number of ideas per sentence
- Auditory support for individual words
- Word-by-word highlighting

The Blue books are written at a fourth- to fifth-grade readability with a fifth- to 12th-grade interest level.

The Blue books have the following features:

- Opportunity for students with lower skills to read with full support of the computer book
- Syntax and vocabulary of more formal or literary English
- More complex or abstract vocabulary than the Gold Library
- More ideas introduced into longer sentences
- More varied sentence structures
- Mastery of first- and second-grade level words assumed; auditory support for individual words above this level
- Sentence-by-sentence highlighting

Our students love the wide variety of engaging stories

Fiction and non-fiction titles include classics, adventures, biographies, mysteries, natural disasters and many more. Our students would never have an opportunity to read *Tom Sawyer*, *Twenty Thousand Leagues Under the Sea*, *Treasure Island*, *Romeo and Juliet*, *Black Beauty* and short stories, by authors such as Mark Twain and Edgar Allen Poe, without access to these books. They are proud to list these titles as books they have read.



The Start-To-Finish books were incorporated into different aspects of the student's curriculum. Some teachers used them during guided reading lessons with the whole class or small groups. They tied them into author studies, novel studies and thematic units. They were also used during independent reading. This helped students to build their confidence as a reader, provide access to a wide variety of titles and to practice reading to become a better reader.

At one of our programs, Miner School, a strong need was identified to provide all the students with opportunities to read for enjoyment. The goal was to start a school-wide book club in which students would be exposed to age-respectful reading material, with an emphasis on building oral language skills. The reading club that began was called P.O.W.E.R. Hour – Positive Outcomes When Everyone Reads

Students met in small groups (three to five students per group) on a daily basis for 30 minutes. One novel was chosen each month to be read by the entire school. All staff members participated by leading a group, including classroom teachers, paraprofessionals, therapists, support staff and even the P.E. teacher! Students were grouped by reading level, age level, type of adaptation or support they required and level of oral language skills. Novels were provided in a variety of formats, including the Start-to-Finish novels by Don Johnston. Some of the novel titles that were chosen were *Treasure Island*, *Building Wings*, *A Christmas Carol* and *Tom Sawyer*.

The Start-to-Finish novels were read by students in a variety of ways. Some teachers chose a whole group approach. The digital format of the novel was projected onto a SMART Board and students listened to a chapter of the book and then discussed what they had read. Some groups chose to have their students read the hard copy of the novel and others had their students read along independently with the digital format on individual computers. Extension activities were provided that included drawing illustrations, watching the movie and attending community plays of the story.

The use of the Start-to-Finish novels was so well received that they were identified as a reading intervention on the Miner School's RTI triangle.

The students responded well to the use of these novels and an increase in both fluency and comprehension was noted. When asked what they liked about the Start-to-Finish novels, students responded, "I like it because it tests what I can remember from each chapter and it challenges us," "I like it because they read to you and they're good," and "I like it because they are cool!"

Teachers also responded very positively to including the Start-to-Finish novels in their instruction. Here is what one of our teachers had to say: "The books are age appropriate and seem like teenager books. Kids can relate to some of the characters and the settings are interesting. The books are written in a way that the kids speak with less complicated conversations. They are written with chapters, which makes the kids feel good about their accomplishments of reading chapter books. In regards to some of the settings, I can teach history, geography and map skills. I like the consistent format of the chapter quizzes. Love the audio. The kids are attentive to the voice that is reading. It is at a good pace and inflection."

A long history

We have a long history of using Start-to-Finish books and have had them available for students for many years. When we first started out, we had a small group of books available in our lending library. We chose classroom sets of popular novels that were most often requested from the schools. These started with classics, mysteries and biographies. In the beginning, we had more gold level books in our lending library than blue level books. This was based on the reading level of many of our struggling readers. Soon schools wanted their own sets of books and began purchasing for their school library and computer labs. Schools in our programs often swapped classroom sets so they had access to a greater set of titles or multiple copies of a title. It was a great way to start getting the books into our schools and into the hands of students. As our needs increased and more purchasing options became available, we purchased an unlimited license for one of our schools. This allowed us to burn as many copies of the electronic book as we needed and we were able to send CDs home with students.

In the spring of 2012, the online version was released

We decided to pilot it at Miner School during the extended school year to be able to give students access to books over the summer. Once we tried the online version, we were hooked! Students could access the books on any computer that had Internet access. They didn't need to go back to the same computer where they started because their work was

now online. They could access books at home and school. Teachers could log in and see data for any student in their class, and administrators/coaches could log in to see data for multiple classrooms.



In this time of teacher accountability and response to intervention, the data collection in this program is an important feature for our staff.



Data is collected on books read, comprehension quizzes, vocabulary quizzes and words clicked on. Detailed progress reports can be viewed online or printed out. Staff can view and analyze the data to further guide instruction. In the online version, this is easily accomplished by logging in on any computer or iPad with Internet access. In other versions of Start-To-Finish, data is stored on the hard drive of the computer and students and teachers must go to the same computer to retrieve data.

Word got out fast about the online version and we found schools asking if they could switch to this new version, including one of our programs that serves students who are deaf or hard of hearing. Often times, students who are deaf or hard of hearing struggle with reading. Many of the students can benefit from the low readability and high interest, age-appropriate titles. Access to the Start-To-Finish books is also beneficial to students who are included in general education classrooms. It gave our itinerant teachers an opportunity to pre-teach a story before the class reads it. This worked out well in the high school where students were required to read Romeo and Juliet, Othello and other classic books.

Our technology and curriculum training specialists were available to provide staff development in a variety of formats. Hands-on workshops were provided during half day sessions, after school sessions and mini-classes. Staff received credit toward certificate renewal for after school workshops. Our workshops emphasized the differences between Gold and Blue level books, setting preferences and looking at data. In preparing materials for staff development, we didn't re-invent the wheel. The Don Johnston website has an assortment of professional development materials and resources that can be used for workshops or independent learning. Some of our favorites included the Train-in-30 tutorial, quick guides, Show-Me-How videos and the Overview of Start-to-Finish video. Additional resources that our staff found helpful were the Start-To-Finish Lexile Level List, Titles with Advanced Content, Setting the Purpose for Reading, and Why is Start-to-Finish so Readable.

Training materials are available on Don Johnston's website at http://www.donjohnston.com/resources/stfonline_index.html

In August of 2011, we were excited to have Don Johnston as one of the keynote speakers at our opening Institute Day. He shared his personal story of how he struggled with reading with our staff. His inspirational speech set the tone for the year and many staff members chose to read Building Wings, Don's autobiography, with their students. It was even more exciting for our students and staff when Don Johnston came to visit two of our schools. Our students had the opportunity to interview Don about his book and being an author. Some student shared their own stories about struggling with reading. Teachers shared with Don how their students found enjoyment in reading through the use of the Start-to-Finish books.

PRICING AND CONTACT INFORMATION

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An abstract graphic featuring a dark blue background with numerous small, light blue musical notes scattered throughout. Overlaid on this are several large, stylized, swirling lines in a lighter blue shade, creating a sense of motion and musical flow. The lines are thick and have a slightly pixelated or hand-drawn appearance.

The Skoog

Introducing the

Viola-clari-banjo-flugelhorn-guitar-drum,

The Skoog for short

A Scottish invention is giving children with disabilities a new opportunity to make the music of the future.

Created at the University of Edinburgh, the Skoog is a unique collaboration between psychologists, musicians, physicists and educators and heralds a new age in inclusive music making in our schools.

Designed specifically to empower those unable to play traditional instruments, the Skoog is a soft, squeezable object that plugs into a computer's USB port. Once that's done, users can simply touch, press, squash, twist or tap the Skoog to play a wide range of instruments intuitively. With five color-coded, touch-sensitive sides, the Skoog offers access to the full dynamic characteristics of a real flute or xylophone, for example, without requiring mastery on the part of the player. Any part of the body can be used to play the Skoog in a variety of ways, such as squeezing it for flute sounds or tapping it to strike a xylophone. And because the Skoog uses physical modelling synthesis — not just sampling, midi or wavetable synthesis (but it can do that too!) — it responds directly to the player's movements, so that variations in touch directly affect the sound produced.

The Skoog makes music accessible for everyone, from musicians who want to experiment, to children with disabilities who might struggle to play an instrument. And with the Skoog, you don't have to find a piano-sized space to store it. It's the size of a digital radio, so you can keep it on a desk or in the cupboard.

With the Skoog, now available across the world, from Hong Kong to High Wycombe, the team is turning their focus to raising awareness of accessible music making.

"There is a lot of discussion in the UK about the importance of the creative arts, particularly music, in the education of young people today. But if you can't hold a violin or blow a flute, how are you going to engage in music making? The Skoog offers a real opportunity for children with disabilities to make their own music and be part of the wider musical community. So we are working hard to let schools, clubs, lending libraries and local authorities know just what this amazing piece of kit can do." (Dr Ben Schögler - co-inventor of the Skoog)

There is no Hendrix of the Skoog yet, but pupils using Skoog are beginning to find their voice. On the 15th of June, 2012, at the Queen's Hall in Edinburgh, the Skoog was featured as part of the UK's Cultural Olympiad celebrations in Drake Music Scotland's Technophonia. Commissioned as part of New Music 2012, Technophonia showcased the talents of three young musicians with disabilities and pupils of the City of Edinburgh Music School.

STEPHANIE'S JOURNEY

Stephanie Forrest, a pupil at Braidburn School Edinburgh, was the Skoog soloist. Stephanie has cerebral palsy, water on the brain and brain development delay. Although she had experienced Skoog during music classes, she had not received any specific lessons on 'skoog' before the project began. Supported by the charity Drake Music Scotland, over the course of 12 months, Stephanie worked with her teacher and a support musician, Lewis Forbes, receiving individual instrumental lessons much the same as any young aspiring musician. The exception — her lessons were not guitar or oboe, but Skoog.

It is important to note that her Skoog part was composed and scored in the traditional way and that she had to learn her part and practice it much the same as the other able-bodied musicians in the orchestra. The traditional notes and staves (the black dots on lines) were translated into a color-coded score that Stephanie could use to guide her through her part.

In the course of 12 months, Stephanie, who had no "classical" musical training or traditional instrumental skill, went from novice to soloist and has since performed across a variety of venues and events, including the Royal Conservatoire in Glasgow, the Queen's Hall in Edinburgh, the South Bank Centre in London and at the SONICA Festival in Glasgow.

You can see recordings of those performances on various sites, such as the BBC News, Drake Music Scotland and the Skoogmusic site.

<http://www.drakemusicscotland.org/what-we-do/spotlight/newmusic20x12/>

<http://www.skoogmusic.com/videos/outandabout/sen-pupil-playing-mainstream-ensemble>

This is an amazing achievement, demonstrating how assistive technology can play a key role in equality of opportunity. Given the right support and access to technology that is genuinely "assistive," Stephanie is able to play and perform on a level playing field with her peers. She is able to be a musician, to develop in skill and knowledge and one day, we hope, to play her own music.



AND THE FUTURE?

The Royal Conservatoire of Scotland is also experimenting with the Skoog to see how far this "new kid on the block" can be pushed by placing it in the hands of instrumental students at the top of their game. The fruit of these labors had its first performance as part of the City of London Festival in July 2012.

Early adopters, such as Edinburgh, Falkirk, Dumfries and Galloway and Orkney Island Council, have lead the way, embedding Skoog as part of their instrumental services in the community.

"I really welcome the genuine opportunity the Skoogs provide us to extend our instrumental service and be fully inclusive." (Tanya McGill - Orkney Islands Council)

SO WHAT'S NEXT FOR THE SKOOG?

"A Skoog in every school, that is the goal. Every pupil should have the opportunity to learn music, and for students with additional support needs, the Skoog can help us realize this goal." (Dr Ben Schögler)

To find out more, go to www.skoogmusic.com, <http://www.drakemusicscotland.org> ■



Getting Writing with the Alphabet on the Radar for

Students with Significant Physical and Intellectual Disabilities

For children *without* disabilities, writing is an essential, unquestioned component of literacy development - from the very start.

The active construction of print, through writing, plays a central role in nurturing children's understandings of print (Sulzby, 1990). In the early years of life, young children have hundreds of opportunities to draw, scribble and make pseudo letters – all of which can be characterized as “emergent writing.” As students develop more knowledge about writing, their writing becomes readable and is “conventional” in nature. Central to this discussion is the principle that emergent writing opportunities play a necessary role in preparing children to write conventional, readable text (Teale & Sulzby, 1986). It is no surprise that students with significant disabilities have radically different experiences with writing. Given their significant disabilities, they have dramatically fewer and qualitatively different early literacy experiences than children without disabilities peers (Koppenhaver, Coleman, Kalman, & Yoder, 1991; Light & McNaughton, 1993; Light & Smith, 1993; Pierce & McWilliam, 1993). For students with significant physical and intellectual disabilities who are unable to hold a pencil, writing may be laborious and frustrating and may not even be on the radar (Hanser, 2006). In the recent decade, the importance of writing for this population has been recognized, however, the majority of attention has been focused on writing with words and/or phrases and less on using the alphabet (Musselwhite & Hanser, 2011). Given the importance of writing using the alphabet, this article will offer concepts, activities and strategies for getting emergent writing and early conventional writing on the radar for this population of students using the full alphabet.



GRETCHEN

HANSER, PhD, has

worked in the field of assistive technology and literacy for students with significant disabilities for over 20 years. She works in a variety of educational settings with teachers, related service providers, parents and students. Her primary focus has been on augmentative and alternative communication and literacy for students with the most significant disabilities. Gretchen has a masters in occupational therapy and her doctorate in education.

No Prerequisites

Based on the emergent literacy view, the conceptual development of writing actually begins at birth, when infants and toddlers are exposed to others writing (Teale & Sulzby, 1986). As toddlers develop, they begin to understand the functions of writing and how it is made. In fact, many toddlers start scribbling before they are 2 years old! Clearly, no child needs to be “ready” to get started with literacy. The same can be said for students with significant disabilities – they don’t have to demonstrate any pre-requisite skills - they don’t have to be “ready” to write (Koppenhaver & Erickson, 2003). Instead, the adults need to be “ready” with the right supports and activities!



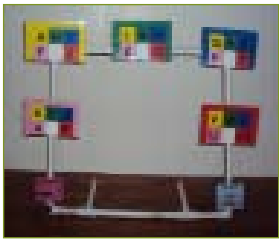


Photo 1 - The color-coded eye gaze frame is used with a partner who sits directly across from the student. Writing is done using a special coding system where the student makes two eye gazes to select one letter. The system is based on the color and/or position of the letters and letter cards. The partner records student's writing.

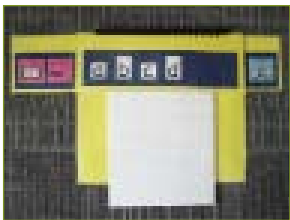


Photo 2 - Used through "partner assisted scanning," the partner scans through the letters presented in separate rows. When the partner points to the letter the student wants, the student signals the partner to write it down. Students can signal using gestures, vocalizations and facial expressions. They can also signal using a single message device programmed with "that's it." Another option uses two single message devices, with one directing the partner to "go to the next" and the other indicating "that's it."

Photos 1 and 2 - From the Center for Literacy & Disability Studies, Writing with Alternative Pencils CD, \$35. For more details about the color coded eye gaze frame, print clip chart and other alternative pencils, go to: www.med.unc.edu/ahs/clds

How Can Students with Significant Disabilities Write When They Can't Hold a Pencil or Use a Standard Keyboard?

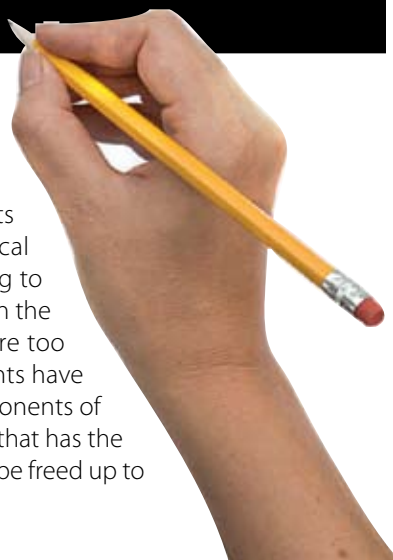
Students with significant disabilities typically have multiple physical challenges. It's no surprise that this is a common problem limiting writing opportunities. Even the best, most elaborate modified pencil grips, splints, cuffs and straps, will not be enough to allow these students to easily generate print. Using standard keyboards are not usually an option either, as they require some degree of fine motor skills. In these cases, professionals need to identify alternative ways for students to write. Luckily, there have been tremendous advances in the assistive technology world that have led to solutions, from light tech paper boards to computer based eye gaze systems. While not by any means comprehensive, below are some examples.

- Augmentative and alternative communication (AAC) systems
- Paper based eye gaze frames and print flip charts – for students who can't use their hands and are struggling to develop access skills. Helpful for students with some eye gaze and those who are learning to use switches. Photos 1 and 2.
- Portable handheld electronic eye gaze device – useful for students who have some eye gaze skills. Photo 3.
- Battery operated labelers - useful for students with pointing skills, but with limited range of motion. Available in most office supply stores. Photo 4.
- Enlarged computer keyboards – useful for students with some targeting skills who benefit from larger targets. Photo 5 and 5a.
- Small computer keyboards – useful for students who have some targeting skills, but limited range of motion in their shoulder and elbow. Photos 6 and 6a.
- Computer based onscreen alphabet displays made using authoring software - appropriate for students who are using scanning via one to two switches, head tracking systems, or eye gaze systems. Photos 7 - 7c.
- Tablet-based onscreen alphabet displays – useful for students who have some targeting skills, but need customizations. Keyboard layouts can be configured to accommodate pointing skills and range of motion. They can also be set up with word prediction. Photo 8 - 8a.
- Keyboards within tablet-based AAC systems - useful for students who have some targeting skills, but need customizations. Keyboard layouts can be configured to accommodate pointing skills and range of motion. They can also be setup with word prediction. Photos 9 - 9c.

For more complete device listings, see Abledata (www.abledata.com), Assistive Technology Industry Association (www.atia.org), and Closing the Gap (www.closingthegap.com).

Consider the Motor Demands

In order to select the most appropriate alternative pencil, professionals need to understand students' motor skills and the motor demands of the different alternative pencils. Whatever physical method is chosen, professionals need to closely observe how the student deals with its motor demands during writing. If students are spending too much mental effort on controlling their physical movements (i.e. struggling to maneuver an adapted pencil, trying to isolate a finger to type on a keyboard, straining to hit a switch), then the motor demands may be too great. When the motor demands are too high, writing becomes a challenging physical exercise, and students have little energy left to focus on the more important conceptual components of writing. The bottom line is: Select an alternative pencil for writing that has the least amount of motor demands. This ultimately allows students to be freed up to engage with the content.



Classroom Vignette:

Jim is a first-grader with autism. He is non-verbal, with fine and gross motor delays. When students arrive at school, the teacher has them all sign in. When Jim signs in, he uses an adapted marker and makes multiple circles of different sizes. The team's focus has been on handwriting, however, the teacher felt that handwriting hasn't allowed Jim to learn how to express himself. She wanted to try another way for him to write. So, she began having Jim sign in using an enlarged keyboard, the IntelliKeys (IntelliTools). Over the following weeks, he typed a scramble of letters, which consistently included multiple "J"s. As time progressed, the majority of his sign in became js. With the right pencil, she was able to more clearly see Jim's understandings about his name. The right pencil also let him move beyond making circles; he could explore a range of letters that he wasn't able to write by hand.

Classroom Vignette:

Mary is a 14-year-old high schooler with spastic cerebral palsy. She is non-verbal, in a wheelchair and unable to use her arms. Accessing an AAC device has always been a struggle; she has been learning to use head switches for two-switch row-column scanning. When using her device for writing, with much effort and accidental switch hits, she was able to generate two to three letters per minute. It was not even clear if those were the letters that Mary had wanted. As a result, Mary frequently shut down and declined to write. It was then decided to try another tool with less physical demands. A simple alphabet eye gaze frame constructed out of PVC pipe was tried (Writing with Alternative Pencils CD, Center for Literacy & Disability Studies, 2009). Physically, the eye gaze frame was far easier and faster to use; Mary was able to generate eight to 10 letters per minute recorded by a scribe. Because the physical demands of the task were minimized, Mary was able to devote her full attention to writing. In journal writing, using the eye gaze frame, teachers found that Mary was doing early sound spelling – a skill they had never been able to see before. While the ultimate goal is to have Mary use her AAC device for writing, in the interim, she can use an alternative pencil to engage in writing.



Photo 3 - MegaBee, \$1219
www.megabee.net



Photo 4 - Brothers Labelers
PT-70, \$19.99
PT-D200, \$39.99
www.brother-usa.com



Photo 5 - IntelliKeys, \$395
www.intellitools.com



Photo 5a - Big Keys, \$159
www.bigkeys.com



Photo 6 - ITouchFree Keyboard, \$126; www.infogrip.com



Photo 6a - Ultra Mini Keyboard, \$79.95; www.ergonomicsmadeeasy.com



Photo 7 - Classroom Suite, \$345; www.intellitools.com



Photo 7a - Clicker 6, \$300 www.cricksoft.com

Choose Open Ended, Purposeful Activities

Regardless of the students' needs, whether emergent or early conventional in nature, they need regular opportunities to write. Emergent writers who are developing early foundational concepts, such as print awareness, need opportunities to "scribble" using technology. Early conventional writers who are just starting to write recognizable text need tons of opportunities to simply learn how to get their ideas on paper. For all of these students, it's important to flood them with personally meaningful, open-ended writing activities. It's important that these activities do not have specific "right or wrong" answers. Such goals are better addressed during comprehension lessons. Examples of open-ended activities include writing picture captions, cards, signs, journal entries, poems, stories and emails. For older students, all of these activities can be accomplished using age-respectful materials.



Topic Setting for Writing

When engaging in emergent, unrecognizable writing, children without disabilities talk about their writing; they describe it and pretend to "read it." The adults rely on this and the context to help them make sense of the writing. Students with significant disabilities, who are non-verbal, are unable to do this and will need support setting a writing topic ahead of time. Topics can be offered to students using a range of strategies, such as offering pictures, objects, parts of objects, classroom lists, students' personal writing topic list, verbal choices and remnant books (Musselwhite, 2011). For example, if the activity is journal writing, students could use one of the above strategies to choose a topic.

Classroom Vignette:

Jake is a 14-year-old with cerebral palsy. He is non-verbal, profoundly deaf and legally blind. The class is writing list poems about an important life event. For topic setting, Jake uses a remnant book. His mother uses inexpensive, small photo albums and fills them with remnants from things that Jake has done. Examples include a lock of hair from a haircut, chopsticks from dinner at a Chinese restaurant, postcards from friends, pictures, a napkin with a logo from a fast food restaurant and birthday cards. Jake is unable to point to the pages; instead, he uses "partner assisted scanning" to make a choice. His teacher goes through the remnant book page by page. When she is on the page that Jake wants to write about, he lets her know with a huge smile. She records his topic and he begins to write.

The Power of 26

Students with significant disabilities often write by selecting words and/or phrases presented in on-screen toolbars or word banks. While these are useful and have their purpose, it is essential to also provide opportunities to write with the full alphabet. For students with significant disabilities, including intellectual disabilities, who have never written before, using the full alphabet seems to be an area that has been given the least amount of attention. However, the benefits of using the full alphabet are multiple. Writing with the alphabet allows students to develop critical concepts of print, such as the concept of a letter, a word and the alphabet (Clay, 2005). Through the use of the alphabet, students are also exposed to the fundamental notion that individual letters are linked to sounds (Clay, 2005; Koppenhaver et al, 1991). Such critical discoveries about the alphabet are crucial for later conventional skills, such as decoding. Additionally, and perhaps most importantly, writing with the full alphabet is the one way that students can learn to generate truly novel ideas.



Photo 7b - Discover:Screen, \$199.99; www.madentec.com

Foster an Interaction

Early literacy development is grounded in the teaching power of the social interaction (Justice & Ezell, 1999; Vygotsky, 1978). This is something that occurs naturally for students without disabilities, however, it can be easily applied to students with disabilities (Kadaravek & Rabidoux, 2010). Given that writing with the alphabet may be a relatively infrequent or new activity, students may be unclear about the what, the why and the how. Adults should discuss the possibilities and the connections while shying away from the temptation to correct. Afterwards, share and celebrate students' writing. Celebrating their efforts can teach students that their writing matters – it is worthwhile.

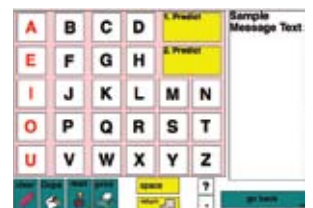


Photo 7c - Boardmaker with Speaking Dynamically Pro, \$749; www.mayer-johnson.com; From Jill Senner, PhD.

Model, Model, Model

Children *without* disabilities are immersed in environments where they see others using a range of tools for writing. These tools are the very same tools that children will ultimately become proficient with for their own writing. Through models, children learn about not only the form, but also the many different purposes of writing (Teale & Sulzby, 1986). Students with significant disabilities are at a serious disadvantage, as it is not likely they have seen others use an "alternative pencil" (e.g. eye gaze frame, flip chart, head pointer, switches on the computer). Modeling is a key teaching strategy for not only building fundamental conceptual literacy knowledge, but also for the motor component of writing. Given this population's serious motor challenges, modeling allows students to see the expected motor response that contributes to students' ability to develop a more efficient motor response (Mulder, 1991; Schmidt, 1988). In addition to modeling during writing activities, professionals need to identify other activities during the day where they can quickly model writing with an alternative pencil.



Photo 8 - Panther Writer, \$29.99 www.panthertechnology.com

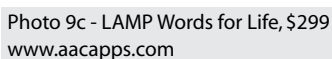
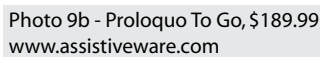
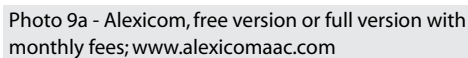
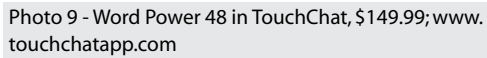
Classroom Vignette:

Mrs. Dalls is a high school teacher in a self-contained classroom. All of her students use some form of an alternative pencil. During a word wall activity, she chooses one of her student's alternative pencils and uses it to write students' names in a short sentence with word wall words. While she is writing, she does extensive think-out-louds about what she is writing, why AND how to use the alternative pencil to select the letters..



Photo 8a- Abilipad, \$19.99 www.apptherapy.com

When it comes to literacy, some students may be seen as “random” and “inconsistent.” From an emergent literacy perspective, this randomness is considered to be part of the developmental process. Accepting and attributing meaning to students’ seemingly random behaviors have been found to be a useful strategy for facilitating more purposeful attempts during literacy activities (Koppenhaver, Erickson & Skotko, 2001). This strategy helps students learn what their actions mean. Over time, as they develop more knowledge about how print works, their behaviors become less random.



Brian is in third grade and has cerebral palsy with unknown cognitive skills. Brian is non-verbal and doesn't have a clear yes/no response. He frequently bangs his head on his wheelchair headrest; he also likes to slap and pinch things. During writing time, Brian is learning to use an alphabet flip chart using "partner assisted scanning" with a single message device programmed with "Write that down!" The class will be writing notes to important people in their lives. Brian is writing to his brother. At the beginning of the writing activity, the teacher models how to use the alphabet flip chart using Brian's single message device on his lap tray. The teacher holds the alphabet board and begins presenting the first row of letters (a-d) on the flip chart. Brian looks away and slaps the flip chart. The teacher starts with presenting the "a" to him. She points to the letter and says it. Brian begins slapping his single message device repeatedly saying, "Write that down!" The teacher responds right away. She becomes quite animated and says, "Oh my goodness you want the "a!" I hear you. I am glad you can tell me. Excellent. Let's write that down." She writes his letter selection with a large black marker where he can see it. The teacher returns to the flip chart, and points to and says "a," again. Brian does not look at any of the letters and he repeatedly hits his single message device to say, "write that down!" Again, his teacher responds and makes a big deal about his selection, and then writes it down. This continues for six more turns until Brian has selected a string of a's. Towards the end of the activity, his teacher observed that he was slowing down with hitting the single message device. She was also very pleased because Brian looked at the letters a couple times.



Give Students Instructional Feedback

For all early writers, especially those who have had very limited or no writing opportunities, it is critical to avoid the notorious correcting “red pen.” However, it is important for teachers to give students some type of feedback. The type of feedback depends on students’ needs.

Students who are “scribbling” with technology need support with learning the fundamentals about writing. Feedback might focus on how the random letters can be used to represent real things and how the letters can be written again using the alternative pencil. Feedback might also focus on having the student visually attend to their selected letters, noticing their specific features, teaching the concept of “letter” and the notion that letters can be put in different orders.

Feedback for students who are just starting to write recognizable words might look slightly different. These students need lots of experiences with simply getting their ideas out on paper, so feedback should target having students write *more*. Discussion should focus on the importance of what students have written, its potential and the power of re-reading writing to add more. It’s also important to teach students to take risks with their writing, especially when it comes to spelling. When students are having trouble spelling words, encourage them to write down the sounds they hear in words. It’s important to not let unrefined spelling skills restrict what the student can write – especially if the goal is learning to get ideas out.

Summary

For children without disabilities, it has been said that “writing challenges students to actively think about print” (International Reading Association & National Association for the Education of Young Children, pg. 200). Given this critical vehicle to understanding, it is clear that students with significant disabilities need to be writing. The time to start is now. Identify the most appropriate alternative pencils, have open-ended, meaningful reasons to write, use the full alphabet, make it fun and celebrate students’ efforts!

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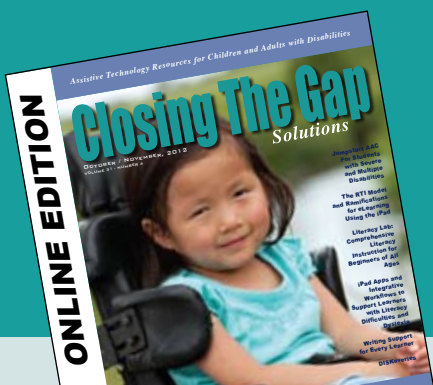
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