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Part 2: Reading for People who are Blind or Have a Visual Impairment

Devices and Techniques

In the previous article, we examined optical and electronic magnification aids that can help a person with low vision to read, enhancing their independence and quality of life. We now move on to devices that can also benefit people who are blind and then discuss how to choose the most appropriate device.

DEVICES THAT READ-ALOUD

For people who are blind or severely visually impaired, electronic magnification is not appropriate and different avenues must be pursued. In this case, optical character recognition (OCR) is one possible solution. OCR is a process whereby a device can photograph a page and recognize the words on that page. Then, using a process known as text-to-speech (TTS), the device is able to read the document back to the user in a synthesized voice. These devices often have a single-page mode whereby each page is photographed and read back one at a time, or a multi-page mode whereby a user can photograph multiple pages, save them and then have them read back sequentially. This mode is perfect for books or other long documents.

The strength of these devices is in the quality of their OCR. The majority of devices on the market today offer good quality recognition, meaning that most of the words from the document being photographed are recognized most of the time. Mistakes, however, will sometimes be made and words are incorrectly recognized, which can lead to confusion for the user. The speed of the OCR is also important, as is the clarity of the synthesized voice. Both of these areas again see improvements every year, and currently users can enjoy very little wait until the device processes the image and begins to read, and uses an audible and clear voice to read to them.

The main drawbacks of these devices, apart from the occasional mistake in character recognition, are that they will only recognize printed text and not handwriting and that they are often unusable when reading documents laid out in unusual formatting, such as bills. Text formatted in a way that is not straightforward often leads to unintelligible results for the end user and is inevitably frustrating. This is unfortunate for those looking for independence in their daily lives, and one hopes it may eventually be solved.

Read-aloud devices, like CCTVs, come in many shapes and sizes, from the extremely portable, such as Humanware's Prodigi tablet and HIMS' Blaze EZ, to the mid-sized, such as the Optelec Clear-Reader and Freedom Scientific's Eye-Pal Ace, to the desktop size, such as Humanware's Prodigi desktop and the Optelec

LUKE SCRIVEN is an Assistive Technology Specialist at The Chicago Lighthouse. He has been in the U.S.A. for five years, having moved from his native country of England where he is a certified Dispensing Optician and member of ABDO and the GOC. He can be contacted at luke.scriven@chicagolighthouse.org

ELISE CORGIAT, O.D., graduated from Illinois College of Optometry in 2005. She was added to the Chicago Lighthouse staff of low vision doctors in August of 2006 and appointed as an Adjunct Clinical Instructor of Optometry with the Illinois College of Optometry in 2007 for her work with teaching students and residents at The Chicago Lighthouse. Dr. Corgiat was attracted to low vision after seeing the negative effect macular degeneration had on her grandfather's life, which inspired her to work to help people in similar situations. She can be contacted at elise.corgiat@chicagolighthouse.org

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C. The desktop size devices blur the line between OCR device and traditional desktop CCTV, offering a live video mode for regular reading, as well as the ability to photograph a document and have it read back to you, displaying the text on the screen in a high-resolution format at the same time, which aids reading comprehension. Devices, such as Humanware's Prodigi, also allow for text to be scrolled in a continuous line from right to left. This is great for eccentric viewing techniques, allowing a user to keep their vision fixated in the spot where the text is clearest and have the text scroll past through that area of vision.

In addition to these stand-alone devices, it is possible to purchase software solutions, such as Freedom Scientific's Open Book, which is a software OCR/TTS solution, allowing a user to scan a document with a regular computer scanner and have it read to them.

One drawback to using these devices to read an entire book is that each page has to be photographed separately, which many users find cumbersome and time consuming. It can also be somewhat cumbersome to navigate through text to find a particular piece of information. Again the suitability of the device depends on the aims of the user. For reading shorter documents or mail (aside from bills), read-aloud devices can be a great aid; however, for the avid reader of books, some of the options in the following section may be more suitable.

DEVICES THAT READ-ALOUD: LATEST DEVELOPMENTS

An interesting development in OCR technology is the development of smartphone apps that can do OCR and TTS. Currently, the most effective is the KNFB Reader app, which is available for iOS and Android for $99. This app is as capable as the more expensive, stand-alone devices, although it requires the user to position the phone's camera above the document correctly in order to perform OCR successfully. The KNFB reader app helps

The Prodigi Connect 12 from Humanware is a good example of the convergence of different areas of assistive technology, featuring distance and near viewing, OCR/TTS and access to all Android features and apps in the Google Play store.

the user position the camera correctly with a "field of view report" that allows a user to take a test photo and have the app tell them what it can see of the page they are attempting to photograph. Even so, a third party stand, such as the Scanjig Pro, can be beneficial for users of the app as it provides a hands-free experience and sets the document at the correct distance from the phone to allow capture of an 8.5x11 page.

Tablet and smartphone technology is becoming a large part of the lives of many people who are blind or visually impaired, and as a result, assistive technology companies are taking interest in the area. One result of this is the Prodigi Connect 12 from Humanware. This device is based on an Android tablet that is housed in a custom made stand and onto which Humanware has installed their Prodigi software suite. This software turns the tablet into a CCTV with the ability to see at both distance (with a separate wireless camera) and near, as well fully featured OCR/TTS capabilities. Interestingly, users can exit the Prodigi software at any time to the Android operating system from where they have access to

all the built-in Android features, as well as thousands of apps on the Google Play store. The Connect 12 folds flat and, with a built-in handle, is extremely portable.

Another interesting development that has recently been released to the US market is known as the OrCam. This is a wearable device consisting of a small camera that mounts to the side of a pair of eyeglasses and is connected to a small computer. Using the device, a user can simply point to a piece of text and have it read to them. The audio is transmitted through a small speaker near the ear or through earphones if preferred. In order to scan through a document, the user can simply move their finger from place to place, with the device tracking the movement and reading whatever text the user's finger is currently pointing to. For those users who are unable to see the text to point, the OCR can also be activated by the push of a button.

One of OrCam's greatest strengths is its portability, making it conveniently accessible wherever a user might be. Although this is also true of the KNFB Reader app on the iPhone, the OrCam also has some other nifty tricks up its

sleeve with product recognition and facial recognition capabilities (which is currently in beta). For many, the technological barrier for entry to using the OrCam will be much lower than the barrier to using the KNFB Reader app, which requires users to first know how to navigate a smartphone.

DIGITAL/TALKING BOOK SERVICES

We have seen then that there are many different ways that people who are blind or visually impaired can access printed materials. Even with using these devices, however, individuals can become discouraged due to limitations of the technology, which lead to slower reading speeds, difficulty keeping track of your place in the text, misidentification of words and the cumbersome nature of photographing pages with an OCR device. For some users these setbacks are enough to discourage them from reading, often resulting in a reduction in quality of life.

In this instance, exploring audio books and digital books instead of, or in conjunction with, other devices becomes a worthwhile endeavor. For the user who has a visual impairment, digital books often prove very popular and audio books may also be an option (although many people with a visual impairment prefer to utilize their remaining vision, if possible). The user who is blind often finds listening to a pre-recorded book much more pleasurable than trying to perform OCR on the same book, both because it is easier to not have to photograph the pages and because it is more enjoyable listening to the intonation of a human voice as opposed to a synthesized voice.

While you are limited to the currently available content with digital and audio books, the amount of available content now is staggering, particularly with the rise of content through providers, such as Amazon and Apple. The rise of digital content has also made it easier than ever for the user with some technical skill to

Using the OrCam it is possible to simply point at the text you wish to have read. The OrCam's camera, mounted on the user's glasses, detects where the user's finger is pointing and reads the text through a speaker mounted next to the right ear

The OrCam is very compact, making it comfortable to wear for long periods. The camera (pictured on top) fits onto the user's eyeglasses and is connected to the computer (pictured at bottom) by a wire.

get access to the books they want, with devices allowing direct download of the desired books from the provider.

For the user who is blind, DAISY readers, such as Humanware's Victor Reader Stream and HIMS' Blaze EZ, tend to be the preferred choice of device. These devices allow books to be downloaded directly on to them and can read books in DAISY format. Books in DAISY format are supplied through services, such as the National Library Services BARD program, Bookshare and Learning

Ally, and provide advanced navigational options, such as bookmarks, navigation by headings, searching for particular words or terms, navigation line by line and so on. These options make reading much more accessible and are invaluable for students who need to be able to find specific information without necessarily reading an entire book.

Access to these books is very low cost or free to people who are blind or who have a visual impairment, and there is plentiful content, from the latest New

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York Times best seller to much needed but perhaps obscure textbooks for students. The National Library Service's BARD program in particular is good for seniors as it can be applied for through the local library and will supply a free book player, which can play either tapes or digital content. This makes it suitable for those who aren't as confident with downloading books.

In addition to audio books, digital books downloaded onto a tablet can be a great resource for those with a visual impairment. Using a service such as iBooks, a user can download books onto an iPad and increase the font size, change the color scheme and brightness and even use VoiceOver to read the text. The great benefit to reading a book on a tablet is that the text will remain wrapped to the screen, however large it is made, meaning the user does not have to track left and right to read sentences as they would on a CCTV. This increases the ease of use and pleasure of reading. It is worth noting also that BARD, Bookshare and Learning Ally also have apps and can be used via a smartphone and tablet.

Something that is commonly desired by people who are blind or have a visual impairment is access to newspapers, and this is certainly possible. Large newspapers often have smartphone and tablet apps that have built-in accessibility options and/or can be used with help from accessibility features built into the smartphone or tablet. In addition, specialist services, such as the NFB's Newsline, exist. Using NFB Newsline, either through the telephone, through a DAISY reader such as the Victor Reader or by using an iPhone app, a user can access hundreds of different newspapers and have them read aloud. Navigation through the newspaper by date, section and article is possible, along with being able to search for a particular word or subject. For seniors in particular, access to a newspaper is commonly requested, and being able to provide help in this area can have a significant and positive impact on an individual's life.

CHOOSING THE RIGHT DEVICE FOR THE JOB

It is apparent then that there are more choices than ever before when it comes to reading for those who are blind or visually impaired. With this wide variety of options, the question then becomes how does one choose the most appropriate device?

When choosing optical devices, it is important to be properly evaluated for their use at a low vision examination. In these examinations, a patient's vision will be assessed using eye charts that are not commonly used in other offices. These charts have more lines of vision to measure so that a calculation can be performed to start trialing low vision magnification. A refraction needs to be performed to know if the current glasses are adequate and if there is uncorrected myopia that will be useful in some styles of magnification tools. The refraction will also clarify what distance the magnification tools need to be held at for the reading material to be in focus. After gathering this information, it is possible to select devices for the patient to trial, encouraging them to give feedback on whether the working distance is comfortable and the field of view of the lens is sufficient. Coordination, willingness and practice are the ingredients for success with optical and electronic magnification.

WHEN CHOOSING TECHNOLOGICAL SOLUTIONS, IMPORTANT QUESTIONS TO ASK ARE:

• What are the client's goals?
• What is the client's level of vision?
• How skilledv is the client with technology?
• What is the client's environment like?
• How does the device fit with the client's self-identity?

Finding out the client's goals is the first step to choosing the right device. For the client whose main goal is to, for example, read restaurant menus, a portable device will be most suited. If we know that client has macular degeneration, then we know that magnification will be useful, and if the client is 20/120 binocularly, then we might assume they will prefer to read the menu themselves as opposed to have it read to them with OCR technology. This can be confirmed through discussion with the client. If this is the case, we can consider portable electronic magnifiers as a solution.

Once we have an idea of which devices might work with the client's level of vision to achieve their goals, we have to ask ourselves whether they will be able to use the device independently. The less skilled a client is with technology, the more transparent the operation needs to be. In this case, factors such as the number of buttons, the complexity of performing major functions, how easy it is to plug the device in to charge and so on become important. The other important factor to consider is the patient's environment. For example, a client may have difficulty remembering the function of certain buttons, but if they have a spouse who is with them most of the time and whose memory is better, the problem is greatly diminished.

The form factor of a device and client's self-identity may also be important factors in device adoption, e.g. does the device mark them out as having a disability or is it discrete,does it look stylish or ugly? These things can again be assessed through discussion.

Each case then should be taken on its own merits and can be easily tackled by following the guidelines above. Usually there will be multiple devices that will fit the needs of the client, whether optical or technological. Providing the client with hands-on time with those devices should conclude the selection process satisfactorily, resulting in a device that both fits the client's needs and which they like. ∎

Smart Watches for Access and Inclusion

While a number of smartwatches were already on the market at the time, Apple's long awaited announcement of the Apple Watch in the fall of 2014 brought significant attention and excitement to this relatively new product category. Rather than being a replacement for the smartphones and tablets many of us carry around, the smartwatch was designed from the start to be a complementary device. Thus, it typically works in concert with a paired smartphone to provide notifications and quick access to information with a glance to the wrist. The idea is to reduce the need to reach into a pocket or handbag to view the information coming into a smartphone and act on it (such as by sending a quick reply to a text message).

As users of these devices, the authors have witnessed, firsthand, some of the benefits and limitations of their chosen smartwatches. In this article, they provide an overview of the major smartwatch platforms and what they can offer to individuals who have special needs, including a review of the built-in accessibility features and some of the third-party apps they have found helpful for themselves and their clients.

APPLE WATCH *BY LUIS PEREZ*

Apple Watch with white sport band.Marketed as both a gadget and a fashion accessory, the Apple Watch is available in a number of models to suit different budgets. The two most popular options are the aluminum Apple Watch Sport (with a starting price of $349 at the time of writing) and the stainless-steel Apple Watch (with a starting price of $549 at the time of writing). With each model, there are two sizes to choose from: 38mm and 42mm. As a person with low vision, I chose to go with the larger 42mm screen size to make the text and other interface elements easier for me to see.

Along with the size and model of the watch, the next choice to make when purchasing the Apple Watch is the band

LUIS PEREZ, Inclusive Learning Consultant, Apple Distinguished Educator, Google Certified Teacher, mobile learning and accessibility advocate, Author of Mobile Learning for All, ISTE Inclusive Learning, St. Petersburg, FL. Visit luisperezonline.com to learn more. Follow Luis on Twitter @eyeonaxs

MIKE MAROTTA, is an AT Specialist and President, Inclusive Technology Solutions, LLC Brick, NJ. Visit mmatp.com to learn more. Follow Mike on Twitter @mmatp

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type and color. Bands are interchange-able, and in addition to those from Apple, a number of third-party watch bands are also available. These vary in not only the material used (leather, metal or plastic) but also in how you fasten the band to your wrist. I have found the more expensive metal bands to be easier to buckle and use, but they can seem out of place when using the watch at the gym or performing any kind of physical activity. Thus, I would recommend also purchasing a less expensive plastic band to go along with the more fashionable ones.

With all Apple Watch models, the smartwatch has to be paired to an iPhone for setup and everyday use. However, a number of its features (such as those related to telling time, Apple Pay, the fitness tracking and a small amount of music and photos) can still be accessed when the Apple Watch is not connected to its paired iPhone. With the watch OS 2 update released in the fall of 2015, third-party apps can also now run natively on the watch, and they can also access the microphone and many of the sensors on the device. Native apps improve performance by allowing apps to do most of their work on the watch itself, where previously most of the work was done on the iPhone, and performance suffered when there was a lot of informa-tion being exchanged between the two devices.

From an accessibility perspective, the Apple Watch continues Apple's excellent track record of including accessibility from the start on all of its products. On the Apple Watch, these features include: the VoiceOver screen reader for those who are blind and need content read aloud; Zoom for users with low vision who need the display magnified; and a number of features for customizing the appearance of the interface, such as by enlarging the text, making it bold, adding on/off labels to indicate the status of controls, removing some of the animations for those who are sensitive to

Apple Watch

sudden movement and more. One of my favorite features is the haptic feedback provided by the Taptic Engine when the watch is set to silent mode. A light tap on the wrist can discreetly let you know if you have received a notification, if your alarm to take your medication has come on, and more. The Taptic Engine also works great with the built-in Maps app, as it can provide different tap patterns to let you know when a turn is coming up.

These accessibility features can be enabled or disabled on the device itself or on the companion app that runs on the iPhone. With just a few adjustments for the small screen size, you will find that you are already familiar with the accessibility features on the Apple Watch if you have used them on the iPhone or iPad, since they work in a similar way. For example, with Zoom, instead of using three fingers to zoom in/out and pan around the display, you use two fingers to account for the limited screen real estate. Similarly, for VoiceOver, you can flick left or right to move by item, move your finger over the screen to navigate by touch or double-tap with one finger to activate a control or launch an app. This is one of the things I have always appre-

ciated about Apple's approach to acces-sibility. What you learn on one device usually translates to the use of other similar devices, reducing the amount of time it takes you to become proficient with the accessibility features, even when it is a new product category like the Apple Watch. To learn more about how these accessibility features of the Apple Watch work, you can view the Apple Watch playlist on my YouTube channel at http://bit.ly/AppleWatchYouTube.

While the Apple Watch does not include any accessibility features for those with motor difficulties, Apple Pay can make payment at places of business easier for such users. Once it has been set up with the credit card information on the paired iPhone, you can pay for goods and services by double-clicking the side button on the Apple Watch and holding it near an Apple Pay terminal. A gentle tap on the wrist and a beep will let you know payment has gone through. While I do not have any significant motor challenges, I am a white cane user, which means at least one of my hands is often busy. I find the Apple Watch to be really helpful when I am traveling. In addition to making payment at restaurants and

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other places of business easier, I can also pay for my coffee by bringing up a barcode that can be quickly scanned at the register. Likewise, while at the airport, I can use the Apple Watch as a replacement for the paper boarding pass I tend to misplace (and can't really read too well anyway). All I need to do is open the Wallet app, find the appropriate boarding pass, hold up the watch to the reader as I go through the boarding gate and I'm on my way.

In addition to the built-in accessibility and features, such as Apple Pay, the Apple Watch also supports a number of Apple and third-party apps. At the time of writing, Apple Watch apps are bundled into iPhone apps. Thus, these watch apps are installed by first downloading a compatible app onto your iPhone, which can be done from the iOS App Store. What follows is just a small selection of Apple Watch apps that can be helpful to users who have special needs:

Proloquo4Text and Proloquo2Go: these two apps from AssistiveWare are companions to the corresponding communication apps on the iPhone. With Proloquo4Text, you can select from a number of preset phrases that are shown upside down on the watch so that they can be read by another person when the watch is pointed away from its owner. Proloquo2Go adds a phrase builder where the user can put together some simple phrases by using the digital crown to select from different categories. Both apps are meant for making requests and other quick conversations that can be continued with the more full-featured iPhone apps.

Children with Autism – A Visual Schedule: this app from Enuma can support children with autism as they transition from one activity to the next over the course of the day, either at home or at school. Each activity shows up with its own icon for easy identification, along with a circle that gets filled in as the time set aside for the activity elapses. Each activity can also have a series of tasks that need to be checked off during the time set aside for the activity.

Fantastical and Due: as a wearable, the Apple Watch is an excellent tool for receiving alerts about upcoming events and deadlines. These alerts, which can be received as either a sound or as a gentle tap of the wrist provided by the Taptic Engine, can be helpful for those who struggle with planning and organization. With both of these apps, new calendar events or reminders can be added through a Force Touch (a firm press) on the Apple Watch screen. The new event or reminder is then synced with the companion app on the iPhone.

Just Press Record: this app allows the person wearing the Apple Watch to dictate quick memos using the microphone built into the device. The recordings are saved to the user's iCloud account, where they can be shared with the teacher or caregiver. This app could be helpful to someone with executive functioning challenges who needs an easy way to record important information before it is lost or forgotten.

iTranslate and Microsoft Translator: in a pinch, these translation apps can facilitate communication between the teacher and a parent or a new student who speaks another language. With each app, you dictate the desired phrase to be translated, then once the translation is shown on the screen, you have the option of hearing it read aloud using the Apple Watch speaker.

Apple Watch can be used as a controller for other devices. For example, with the Keynote and PowerPoint apps, you can advance the slides on a presentation shown on your iOS device or Mac. Similarly, a number of audio apps allow you to control remote playback using the Apple Watch. One of my favorites is Overcast, which I use to subscribe to a number of podcasts I can listen to when I'm on the go. As a photographer, you also have the option of triggering the shutter on your iPhone's camera from your Apple Watch. This is supported not only with the built-in Camera app, but also with a number of third-party apps, such as Pro Camera.

To get a sense for how Apple Watch apps can be used along with the VoiceOver screen reader available on the device, check out the Day In the Life with Apple Watch video I created for my YouTube channel at http://bit.ly/dayin-lifeapplewatch. As with the iPhone and other iOS devices, support for VoiceOver and other accessibility features will vary from app to app. It all depends on how well the developer has followed best practices for accessible app design, including the appropriate labeling of all interface elements so that they can be accurately described by VoiceOver.

After almost a year with the Apple Watch, I find that rather than always opening the individual apps on my watch, I spend most of my time interacting with the information these apps provide through features, such as Notifications, Complications and Glances. Notifications can be accessed by flicking down with one finger on the watch face to reveal alerts for incoming text messages, upcoming calendar events, reminders and more. As the name suggests, Glances provide quick access to information from compatible apps by flicking up with one finger on the watch face. Complications are the additional information, other than the time, that can be displayed on the watch face itself. In my case, I often add complications for a weather app and the battery status to my preferred watch face, so that I can access this information with a quick glance of my watch, without the need to open the associated app.

Overall, I have found the Apple Watch to be a helpful companion when I travel and need to access information quickly while I am on the go. I would highly recommend the device to anyone considering a smartwatch, provided he or she is already invested in the Apple ecosystem. As currently configured, the watch requires its owner to also own an iPhone to get the most out of it. I would also recommend the Apple Watch for

someone who is blind and needs a screen reader to interact with his or her smartwatch, as the Apple Watch is the only device of its kind with support for that accessibility feature at the time of writing. Finally, I would also recommend the device for older learners (high school and above) who can be trusted to take care of what is, after all, a relatively expensive gadget. Although the Apple Watch is not difficult to master, there is also a slight learning curve to it. For younger learners, a simpler, less expensive device may be a better option.

ANDROID WATCHES *BY MIKE MAROTTA*

Android War watchAndroid. Be Together, Not the Same. The advertising tag line sums up the Android universe perfectly. An open operating system that has brought us many different devices running some version of Android. Kind of the direct opposite of our Apple devices! Same thing with Android watches – there are two different operating systems in use today: Android Gear and Tizen OS. When comparing Android watches to the Apple watch, several things quickly become apparent. First, there are more apps available for the Apple Watch OS ecosystem. Second, and more important with relation to this article, is that the Apple Watch OS has many more accessibility features available to customize the experience for users with all abilities.

ANDROID WEAR

The majority of Android watches run the Android Wear operating system. One interesting feature of these watches is the fact that they will work with both Android phones (running Android 4.3 or higher) and iPhones (running iOS 8.2 or higher).

Many of the available accessibility features are focused on users with visual impairments. The available features include magnification, inverse colors on the screen and modifications to text size.

The Android Wear watches come from many different manufacturers including:
- Moto 360
- Huawei Watch
- ASUS Zen Watch 2
- Sony SmartWatch 3

Even though many of the Android smartwatches run the Android Wear OS, there are still differences in the watch hardware that dictate which features are available. For example, Android Wear has the Audio Feedback feature. This feature will read aloud the time and all notifications. Users can also use this feature, along with voice actions, to send and respond to text messages plus send and receive calls. This powerful feature is only available on the Android watches with a built-in speaker (the LG Urbane 2nd Edition LTE).

SOME USEFUL ANDROID WEAR APPS INCLUDE:

AutomateIt – This automation app can be used to create macros to control a series of functions on your smartphone. These can include actions such as Launch your Home Screen; Dial a phone number; and even use the smartphone built-in text-to-speech to say defined text.

TickTick Wear – A checklist app that can act as a task manager. Includes the feature to use voice commands to create tasks.

Trello – Project manager app that allows sharing and collaborating with others on projects. Attach files from Google Drive and Dropbox.

TIZEN OS

At this point, the only device running the Tizen operating system is the Gear S2 from Samsung. This device is Samsung's newest wearable watch and they have moved from Android Wear to embrace the Tizen OS. As with the Android Wear devices, the accessibility features include visual modifications to the screen. One addition to the Gear S2 is the S Voice feature. This feature allows the user to

The majoirty of Andorid watches run the Android Wear operating system.

use voice commands to control functions of their connected smartphone.

One of the biggest features still missing is the Talk Back screen reader feature found on Android mobile devices. Talk Back is Android's version of Voice Over. The Android Wear OS will make considerable steps forward with the future addition of this feature.

One powerful feature of all the smartwatch operating systems is the ability to send notifications from your smartphone directly to your wrist. Another way to extend the functionality of the Tizen OS used on the Gear S2 is to incorporate the use of Tasker. This $.99 app turns you into a power user! You can create automations that control an array of functions on the smartphone. Users create "recipes" that tell the smartphone to complete tasks and execute functions, such as turn off volume, launch applications, etc.

SOME OF THE GEAR S2 (TIZEN OS) APPS INCLUDE:

Voxer – This turns your smartwatch into a walkie talkie! Voxer is a social media app for networking. This app will

allow user to record messages directly from the watch and play messages on the smartphone.

Camera Controller – Use your smartwatch to control the camera on the smartphone. Could be a very powerful app for individuals with physical disabilities. Use the watch face like a giant button to take pictures.

Total Spent S2 – Keep track of money spent right on your watch.

My Notes in Gear – Manage To Do Lists and checklists. Add in notes, receive reminders and notifications.

Presentation controller – Want to control your Powerpoints from your watch? Well this is the app for you! Using the watch app, in conjunction with the PC software and add in for the smartphone, provides the ability to advance presentation slides by clicking the watch face.

OTHER OPTIONS

Your choice of smartwatch will depend on a number of factors: how much you are willing to spend, whether you are a watch wearer at all and what you need the device to do, based on your lifestyle. Not everyone needs a full-featured smartwatch like the Apple Watch or one running Android Wear. If all you need the device to do is provide you with quick notifications, and you don't need the robust accessibility support of an Apple Watch, a number of less expensive options are available.

PebbleOne of the originators of the smartwatch concept, Pebble, still has its original device (the Pebble Classic) available on its online store for about $100 (it is also available for less on Amazon). With a grayscale e-paper display, this device provides up to seven days of battery life, meaning you will not have to charge it as frequently. It is also water resistant down to 50 meters, which can be a good thing if spills are a concern. While all Pebble watches, including the Classic, support apps, the selection is not as extensive as with the Apple and Android offerings.

The Pebble is one of the originators (pictured far left). Unlike the all-digital Pebble, the Martian Notifier is a traditional analog watch that has a small display for notifications on it.

However, if all you need is a device that provides quick notifications, the Pebble Classic may be a good choice for you. As a bonus, Pebble watches work with both Apple and Android smart phones.

Martian Notifier watchesUnlike the all-digital Pebble, the Martian Notifier is a traditional analog watch that has a small display for notifications on it. In this way, it is a blend of analog and digital. The Notifier starts at $129 on the Martian online store, but it can be found for much less on Amazon. It can keep a charge for up to six days, supports custom vibration patterns and can be used as a camera shutter for a connected smartphone's camera. As with the Pebble, it can be used with both iOS and Android Wear smartphones.

A number of companies better known for fitness tracking devices, such as Fitbit, are also dipping their toes into the smartwatch market. In addition to tracking workouts, measuring heart rate and performing other fitness related tasks, many of these devices now have a screen for displaying notifications from a connected smartphone.

CONCLUSION

Devices like the Pebble Classic and the Martian Notifier (or even a fitness watch from a company like Fitbit) may be ideal for someone who struggles with organi-

zation and just needs quick reminders (in the form of notifications and alarms) to stay on track. The simplicity of these device may also be ideal for users who could find the learning curve of a full-featured smartwatch challenging. Finally, due to their lower price, they may be a better choice for children and those who are likely to break or lose the device.

The bottom line: these devices allow you to experience some of the convenience of a smartwatch (the ability to receive notifications from your smart phone) without the high cost of more full-featured devices like the Apple Watch. You can try one out, see how it fits into your lifestyle, then, if you still need something more robust, you can always pass it down to someone else in your family. If however, you are blind or have low vision, then these devices may not be of much use for you due to their accessibility limitations. In that case, the Apple Watch or a device running Android Wear (once it gets a screen reader) may be a better fit. As it often does, it should come down to your needs, rather than what is getting the most buzz in the press or the most marketing. ∎

Helping Every Child Achieve Reading and Writing Success

A Closer Look at Clicker 7

Do you have students who have great ideas, but struggle when it comes to capturing them in their work? Students who can really shine, but need some help accessing the curriculum? How about students whose enthusiasm for learning is being hampered by writing frustration?

It's a real challenge to successfully meet the diverse learning needs encountered in today's classrooms, but educators across the world are turning to Crick Software for help. Our popular literacy tool, Clicker, is currently used in thousands of schools and homes to support students with dyslexia, learning difficulties, autism, physical disabilities and other special educational needs.

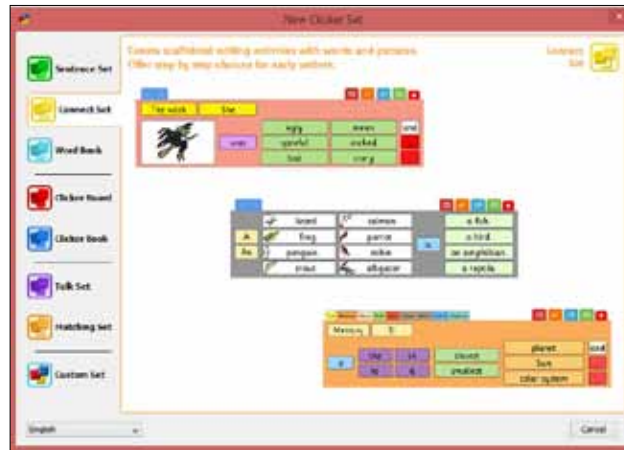Clicker is the child-friendly word processor that helps every student to significantly develop their literacy skills. Teachers are able to quickly create differentiated speaking, listening, reading and writing activities on any subject, and there are hundreds of professionally-made activities to download and use right away.

We were very excited earlier this year to announce the launch of the latest version of this award-winning tool, Clicker 7. Let's take a look at some of the new features that assistive technology specialists, occupational therapists, speech and language pathologists and special education teachers are getting particularly excited about!

CHILDREN'S VOICES

Clicker's brand new children's voices give students the opportunity to hear their work read back to them in a friendly, age-appropriate voice that they can identify with.

Speech feedback encourages students to punctuate their work and ensures that they review each sentence before starting the next one. Children hear any mistakes they may have made and independently make corrections and revisions. The spell-checker, predictor and Clicker Grids are also speech supported, opening up the use of these features to students who

Image 1 – Creating a Clicker Set is easier than ever with Clicker 7.

DEB YERGEAU has 12 years of experience in the Education field. She has a bachelor's degree in Elementary Education from Stonehill College in Massachusetts. Before joining Crick Software in 2008, Deb worked as a one-to-one assistant for a student with autism, and then became a 4th grade teacher. Currently, she is Operations Manager at Crick Software.

find it difficult to visually distinguish between words.

You can also paste any piece of text into Clicker and have it read aloud, giving struggling and emergent readers independent access to text that they would find difficult to read themselves.

CLICKER SETS

While there are activities to download and use right away, it is now easier than ever for teachers to create sentence-building activities, word banks, matching activities, talking books, graphic organizers and speaking and listening resources. Many activities are fully compatible with the Clicker Apps ($32.99 each), making it easier to switch between technologies, depending on the classroom the student is in or the needs of the student (see Image 1).

CHILD-FRIENDLY PLANNING SPACE

Clicker Board provides Clicker users with a built-in planning tool to help them prepare for writing. Students can manipulate and link any combination of words, pictures and sounds together on their Clicker Board, mapping out their ideas in a way that is easier to understand and particularly effective for more visual learners (see Image 2 for one type of Clicker Board example).

Students with ASD often find mind mapping to be a really useful way to plan their work, and Clicker Board has also proved to be a big hit with those supporting students with dyslexia, many of whom find longer pieces of written work harder to organize and structure.

Ready to start writing? Once a Clicker Board has been created, it can be instantly transformed into a word or picture bank that will sit at the bottom of the document as students write, providing instant point-and-click access to key words, phrases and/or images.

AUDIO NOTE CREATOR

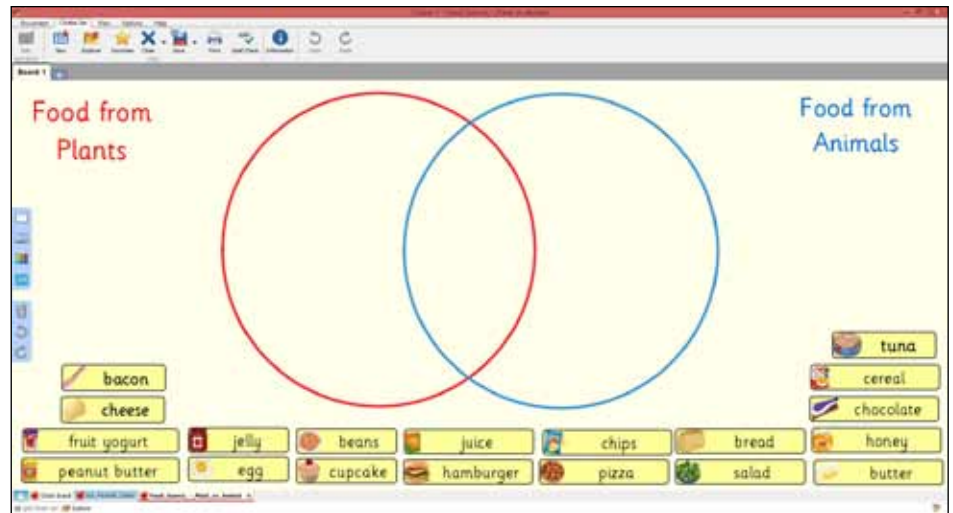When children select Clicker 7's new Voice Notes tool, they will be given the

Image 2 – Students or teachers can easily create graphic organizers with Clicker Board.
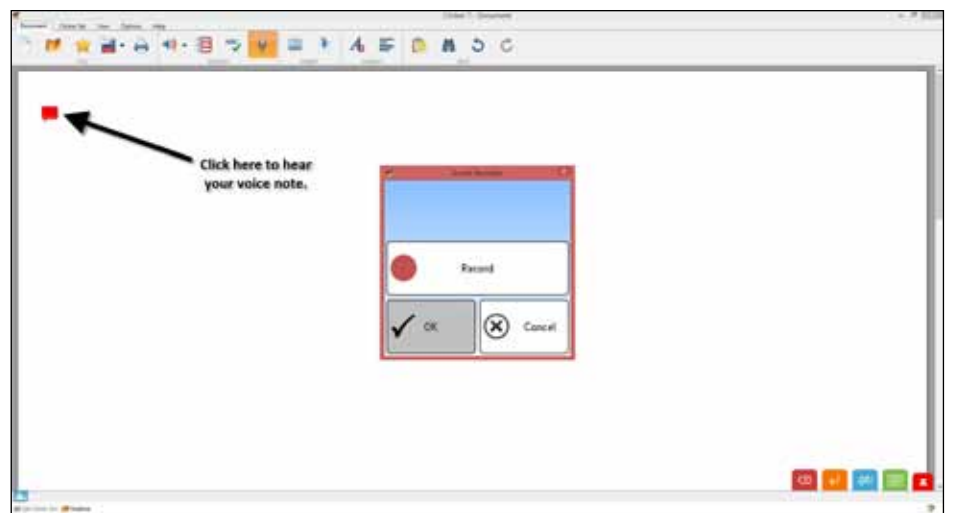

Image 3 – Students or teachers can create voice notes within a Clicker Document to record ideas, reminders, or directions.

opportunity to record their own audio notes (see Image 3). This is a great way for children to vocally rehearse their sentences in preparation for writing.

In addition, Voice Notes offer a powerful way to record initial ideas, giving children who struggle to express themselves in written form an opportunity to capture their thoughts without being distracted or held back by the mechanics of writing.

They are also a great tool for teachers; use them to record activity-specific instructions or to create verbal prompts for your learners. This will help them work their way through tasks more indepen-

dently, focus on the key objectives and organize their writing more effectively.

EASY-TO-READ FONTS

Font choices can make such a significant difference when it comes to making text more accessible for certain students. Clicker comes with the Sassoon font as a default, which is based on letter formations familiar to beginning readers and writers, for example, rounded letters. Key features include the handwriting-like exit strokes at the base and longer ascenders and descenders, which aid letter and word recognition. The line spacing is also

slightly bigger than most fonts to make texts easier to read.

While a range of other fonts is available in Clicker, new for Clicker 7 is the option to use Dyslexie (see Image 4), a font designed specifically for children with dyslexia, who often find it difficult to discriminate between letters and may see text as compressed and vibrating. The letter differences are enhanced, letters are weighted at the base to help with vibration and there is generous spacing to help with vibration.

ENHANCED PICTURE SUPPORT

Clicker 7 includes an enhanced library of over 3,500 curriculum-related pictures, making it easy for educators to provide relevant graphical support for learners who need additional help. Of course, you can also use your own pictures, which is a great way to create a really engaging, personalized activity – why not try creating a talking book about your latest field trip or a resource about your student's favorite toy? Clicker also offers picture-supported writing, where a picture is shown above each word (see Image 5), encouraging learners to make the connection between the words and the corresponding images.

TARGETED SPELLING INTERVENTION

Clicker's intelligent predictor suggests words based on the context of the student's writing. This helps to overcome spelling frustration, speed up writing productivity and encourages all students to use more adventurous vocabulary.

If there are certain words that your students regularly want to include in their writing that are not currently being suggested by the predictor, proper nouns or unusual curriculum vocabulary, for example, you can use Clicker 7's new Word Pool tool to add them to the program's knowledge base. You can even link common misspellings to them,
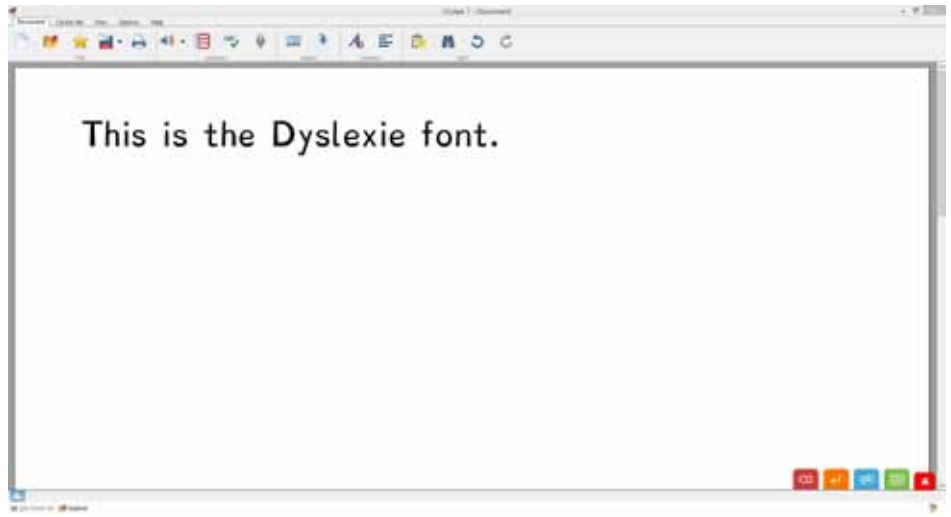

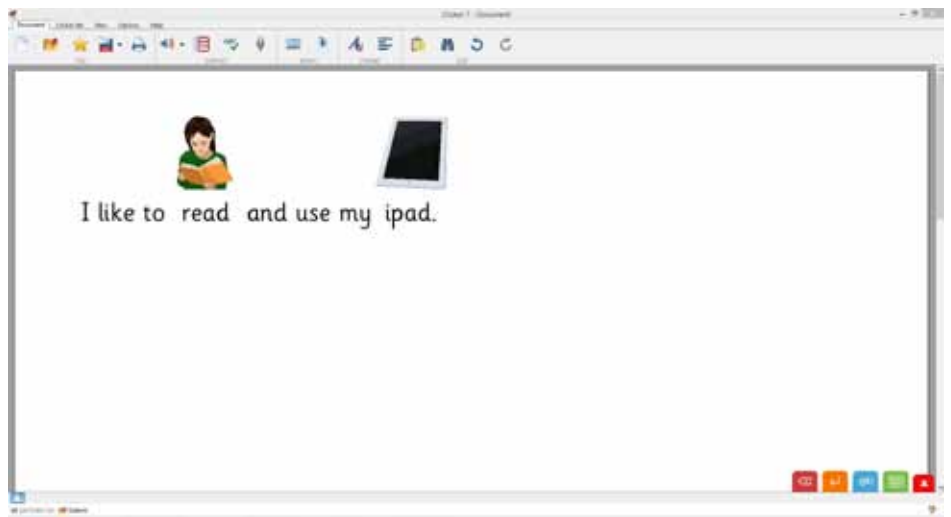Image 4 – Dyslexie is a font designed for students with dyslexia.

Image 5 – Picture-supported writing is an option within the document, the predictor, and in Clicker Grids.

enabling you to tackle specific spelling patterns your students may be struggling with (see Image 6).

EYE GAZE COMPATIBILITY

Eye gaze technology is a life-changing accessibility method for many children with physical disabilities. In Clicker 7, you can now select this option via the Accessibility menu.

Clicker's Eye Gaze setting enables children to focus on a particular cell or button for a set period of time to select it

– it's easy to optimize this for your learner by adjusting the dwell time.

If your student struggles with eye gaze control, the Wobble Distance feature, which locks onto particular areas so that the wobble isn't visible, will really help to develop their confidence. Clicker also won't repeatedly select an item if a student stays focused on a particular cell or button, further streamlining the selection process.

SUPERKEYS

SuperKeys is our innovative on-screen keyboard for people with mild to moderate physical challenges and those with low vision. The app version for iPad has been incredibly well received by the special needs community and recently won the prestigious Bett Award for best ICT Special Educational Needs Solution, so we decided to make this a built-in feature for Clicker 7.

The unique design of SuperKeys gives you just seven large keys to target instead of more than 30 small ones. Just tap the cluster containing the letter you want and then tap the letter in the enlarged cluster to send it into your document (see Image 7).

Try combining SuperKeys with switch or eye gaze control to make Clicker even more accessible for your learners – it also makes Clicker much easier for those who struggle with fine motor control.

FURTHER ACCESSIBILITY

Clicker has always been switch accessible and continues to be when connected via the Crick USB Switch Box, at $159. The switch box can be used with students who require one- or two-switch scanning and is extremely easy to set up to work with Clicker 7 and other software.

Clicker is also touchscreen friendly and we've updated our on-screen keyboards to reflect this and make it easier to use for touchscreen users.

FIND OUT MORE

There are a variety of licensing options available for Clicker 7, from a single computer up to a whole school Site License. Prices start at $495. We also have special pricing for home users. If you'd like to find out more about Clicker 7, you can watch our short introduction video, download our 28-day free trial, or contact our friendly team to arrange a demonstration.
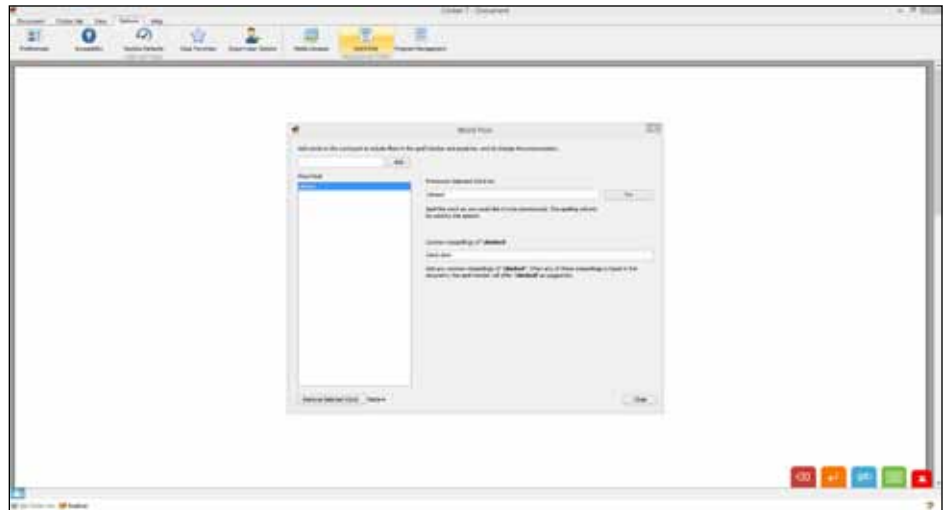

Image 6 – Word Pool enables users to change the pronunciation of words, and add words to the spell checker and the predictor.
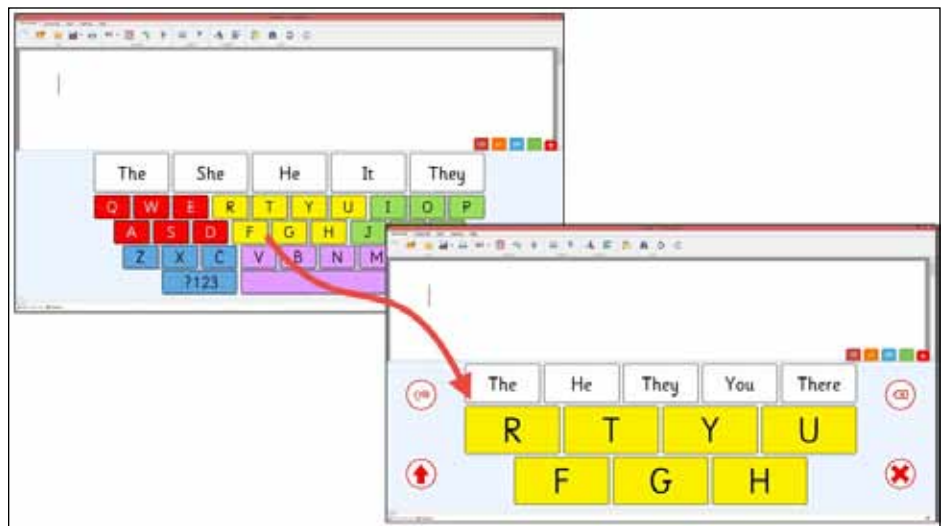

Image 7 – With SuperKeys, tap a cluster and it will enlarge to support easier access for those with physical challenges and those with low vision.

CONTACT INFORMATION:

Crick Software, Inc.
Deb Yergeau
191 Post Road West
Westport, CT 06880
Phone: 203-221-2697
Toll-free phone: 866-332-7425
Fax: 203-221-2698
Email: USinfo@cricksoft.com
Website: www.cricksoft.com ■

34th ANNUAL CONFERENCE

Closing The Gap
OCTOBER 19-21, 2016
Preconference Workshops
Monday and Tuesday, October 17-18, 2016

MINNEAPOLIS, MINNESOTA

Assistive Technology in Special Education, Rehabilitation and Everyday Living

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✔ **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.

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

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ADMINISTRATORS PARTICIPATE FREE

When any school district or hospital staff member registers for a preconference workshop or the three-day conference, one administrator (Special Education Director, Principal or Hospital Administrator) from that organization can attend the conference, Wednesday through Friday, and the exhibition preview, Tuesday evening, for FREE! One free registration per district/hospital.

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A **$30 "RETURN" DISCOUNT** is available to ANY past conference registrant and must be used by **JUNE 30, 2016**.

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.

LEARN MORE AND REGISTER ONLINE: WWW.CLOSINGTHEGAP.COM

Conference - Wednesday, Thursday, Friday, October 19-21, 2016 Includes Preview of Exhibits – Tuesday Evening, October 18				
Registration Received	**On or Before June 30**	**July 1 - September 8**	**September 9 - October 6**	**October 7 - Onsite**
Standard Rate **Group Discount - 5 or more** **Group Discount - 8 or more** *All group registrations must be received at the same time.*	**$440** Groups 5+ Deduct $30 Groups 8+ Deduct $50 Groups 20+ Deduct $70	**$490** Groups 5+ Deduct $30 Groups 8+ Deduct $50 Groups 20+ Deduct $70	**$515** Groups 5+ Deduct $30 Groups 8+ Deduct $50 Groups 20+ Deduct $70	**$540** Groups 5+ Deduct $30 Groups 8+ Deduct $50 Groups 20+ Deduct $70
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)*				$300
Presenter Rate	$350		$400	
Exhibitor Rate	$350		$400	

Single-Day and Exhibit Hall Only Registration	Price
Thursday Only - October 20	$275
Friday Only - October 21	$125
Exhibit Hall Only - Tuesday evening through Friday, October 18-21	$150

Preconference Workshops - Monday and Tuesday, October 17-18, 2016 Includes Preview of Exhibits – Tuesday Evening, October 18	Price
Monday, October 17 *(Some preconference workshops carry an additional fee for materials)*	$275
Tuesday, October 18 *(Some preconference workshops carry an additional fee for materials)*	$275
BUNDLED PRICING! **Monday and Tuesday Bundle ($60 savings)**	$490

PRECONFERENCE WORKSHOPS

Monday and Tuesday, October 17-18, 2016

COME, NETWORK, LEARN – Each workshop is conducted by a nationally recognized leader in the field, providing in-depth professional skills necessary to successfully implement assistive technology in the lives of persons with disabilities.

PC-1 Two-Day Introductory PODD Course (Official PODD Course)

PC-2 Personalizing Learning for All with Emerging Technologies

PC-3 Emergent Writing and Students with Significant Disabilities: Moving Beyond "Scribble" (Apps Included!)

PC-4 Creating Solutions in Minutes: Using Ordinary Items in Extraordinary Ways - A Make-and-Take Workshop

PC-5 Somewhere Lost in the Middle: Serving Students who Struggle with Executive Skills, Processing, Working Memory and Retention

PC-6 Beyond 90/90/90: Developing and using seating and mobility systems to support task engagement and functional use of AT systems for students with the most complex bodies

PC-7 iTech Boot Camp: Using iTechnology as Evidence-Based Practice to Meet the Learning and Behavioral Needs of Students with Autism Spectrum Disorder

PC-8 A Roadmap for AAC Instruction in the Classroom: Supporting Conversation, Literacy and Language

PC-9 Back to Basics: Building Language Skills for Children Who Use AAC and Teaching Educators and Parents to Provide AAC Supports

PC-10 Comprehension Instruction for Students with Significant Disabilities: Beyond "Wh" Questions

PC-11 Access to Print, Supports for Writing and Video as an Alternative Means of Expression

PC-12 "Help! I'm an AT Specialist and I Can't Get Up!" Creating Manageable School-Based AT Services

PC-13 The Importance of "Mousing" Around! (and other access issues for using the Internet, especially for students with complex bodies)

PC-14 The Behavior Puzzle: Putting It All Together!

PC-15 Teaching the Art of Scanning

PC-16 AEM for Student Success!

PC-17 The Power of Core: The Nuts, Bolts and Tools to Build Language and Communication Skills for Our AAC Users

CALL FOR PARTICIPATION

Share your expertise, learn and network at what has become known as the best educational AT conference in North America.

The Call for Participation for Closing The Gap's 34th Annual Conference, October 19-21, 2016 is now available online. A pdf of the Call is available as well.

Deadline to submit is 2:00 pm Central Daylight Time, Thursday, May 12th.

SUBMIT ONLINE

34th ANNUAL **CONFERENCE** Closing The Gap
OCTOBER 19-21, 2016
Preconference Workshops
October 17-18, 2016
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✔ PROFESSIONAL DEVELOPMENT CEUs, Academic Graduate-level Credit and Certificates of Attendance are available for workshop participation.
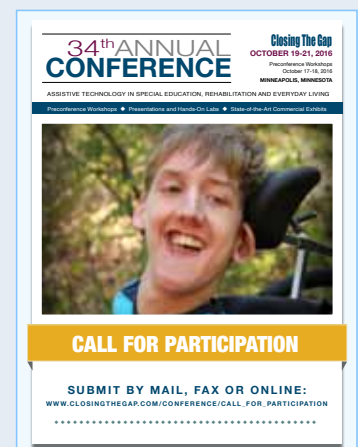
LEARN MORE AND REGISTER ONLINE WWW.CLOSINGTHEGAP.COM

Supporting Common Core Requirements for Vocabulary Development
Using Tier Two Words and News-2-You

Higher Literacy (Langer, 1999) Includes not only basic reading and writing skills but also the ability to use language, content and reasoning in ways that are appropriate for particular situations and disciplines. In essence, higher literacy involves students' abilities to engage in thoughtful reading, writing and discussion about content in the classroom.

During a presentation titled "Helping Adolescents Meet the Language Demands of Disciplinary Literacy", Dr. Barbara Ehren stated that the single most important thing an SLP can do to support literacy in the general curriculum is to target Tier Two Vocabulary.

Utah State University, Communication Disorders Seminars, 2013

As the Common Core Curriculum is being implemented in many states' school districts, speech-language pathologists are looking for ways to support the general curriculum in an effective, inclusive, measurable and achievable manner.

Tier Two words occur frequently throughout the general education curriculum, are a central part of comprehension and are typically understood by persons who do not present with a language delay. Tier Two words are a good choice for targeted instruction as they support vocabulary development across content areas.

Students with speech-language impairments often present with reading, writing, speaking, listening and language (vocabulary) deficits. Many times these

NADEAN LESCOE is a graduate of Utah State University. She holds a bachelor's degree in Communicative Disorders (Speech-Language Pathology), a minor in Psychology and a Master's degree in Speech-Language Pathology. She has an ESL endorsement from Weber State University and is RESNA certified as an Assistive Technologies Professional. Nadean is the recipient of three ASHA ACE awards. She works as a Speech-Language Pathologist for the Ogden City School District in both the elementary and Jr. High School setting. Nadean has been a member of the Utah Assistive Technology Team Project for the Utah State Office of Education for more than 12 years. lescoen@ogdensd.org

deficits are most affected by the student's ability to understand and use general academic and content specific vocabulary in an effective, meaningful way. In addition, lack of vocabulary development adversely affects the student's ability to accurately participate in areas of the common core that require them to write informative/explanatory texts to examine a topic and convey ideas and information clearly (Common Core Writing Standard 2). Students with vocabulary deficits also struggle to determine the meaning of unknown and multiple meaning words (Common Core Language Standard 4) that are frequently used in classroom text.

Using News-2-You, an adaptive newspaper, and Tier Two words, the speech-language pathologist is able to provide functional, inclusive literacy units that target portions of the reading, writing, speaking, listening and language requirements of the Common Core.

At the conclusion of her seminar, Dr. Ehren challenged each participant to "have a plan" that would support vocabulary development in adolescents. In response to her challenge, I created a literacy program using Tier Two words and News-2-you.

First, I created a pre-test/post-test for each of nine grade-level units that are given at the beginning (first week) and end (fourth week) of each unit. The first unit contains 12 novel words, with each additional unit having six novel and four review words (taken from previous units). In addition, each student (4-6th grade only) creates a dictionary where they put the words we have covered. The second week focuses on reading a News-2-You article - the first time for reading experience and comprehension, the second time to identify and highlight the main idea and supporting details, and a third time when we substitute target vocabulary for current words in the article. The

Week One: Give pre-test for new words. Introduce new vocabulary words and put them in dictionary.

Week Two: Read News-2-You article and check for comprehension (review words). Highlight main idea and supporting details.

third week we do choral writing, summarizing the article using the new "target" words in our writing. The fourth week is "BLURT" week (vocabulary review). However, I use the Tier Two words in place of the vocabulary that comes with the game. During the game, my students are allowed to use their dictionaries, if needed (for students at the junior high school, a dictionary is provided for them). Once the die is rolled, I present a word from those we have already studied. The first student to reply with a correct answer moves the number of spaces rolled. If the student was able to give the correct answer without using the dictionary, the move is doubled. Each time a student passes GO, they collect a piece of candy (they love blue Jolly Ranchers!). After reviewing the words, I post-test the students. The scores are recorded on each student's data sheet.

Upon completion of the first unit, I plotted the pre- and post-test scores on a bell curve. The curve showed 0% of students scored above the 50th percentile. The post-test scores showed improvement by all students, with 14 of 25 students moving past the 50th percentile.

The program is data driven, measurable, achievable and ties into the Common Core. It is being used by myself and colleagues in seven elementary, three junior, and two high schools, which means a student who leaves my school and enters a participating school does not have to play "catch up." The student walks in to familiar words, reading material and routines.

Using Tier Two words allows me to support student progress across the general education curriculum.

RESOURCES

Ehren, B. J., Blosser, J., Roth, F. P., Paul, D. R., & Nelson, N. W. (2012, April 03). Core commitment. The ASHA Leader

Blurt is a product of Educational Insights ($29.50) 1-888-80007893

News2-You at news2you.n2y.com (subscription cost is $169 per year) ■
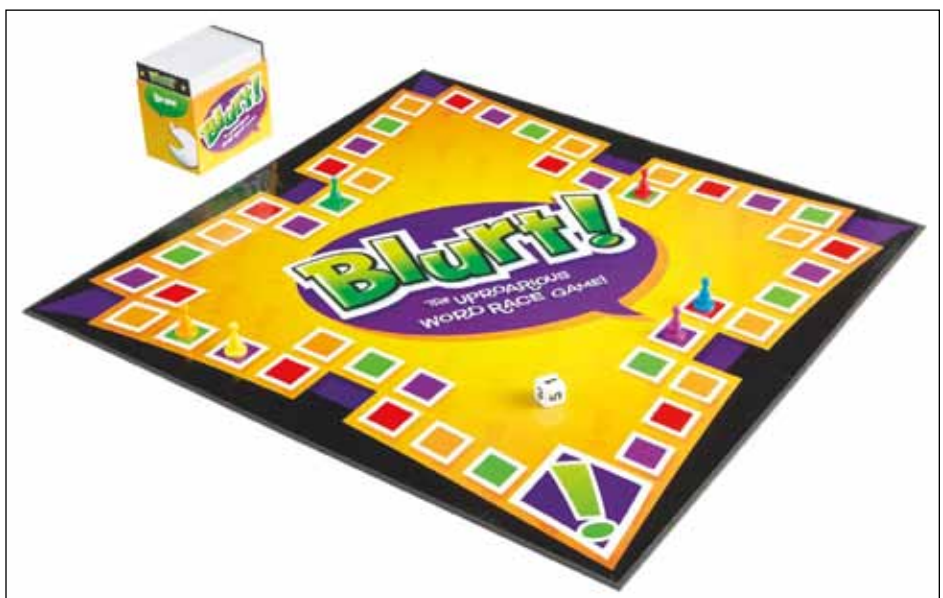
Tier Two Vocabulary Units

(When) In 1943, during World War Two *(Who)* the United States government was concerned about having enough *(What)* rubber to supply Military troops with boots, tires, raft, etc.
(Who) James Wright was hired to invent a a new *(What)* variety of rubber. One day he mixed two chemicals and got a distinct kind of (What) rubbery material which became known as Silly Putty. Because it did not hold its shape the *(Who)* military could not use his rubber. However, the public loved Silly Putty and it became an immense success selling 250,000 eggs the first three days!
(When) Today Silly Putty comes in a *(What)* variety of vivid colors and has a diverse range of uses. Silly Putty can be shaped, bounced andstretched slowly, or it can be pulled quickly severing it into two pieces. It is used in therapy to stengthen hands. *(Who)* Astronauts even used it in space to keep thing from floating around!
*(What)* Silly Putty began as James Wright's mistake and ended up as one of the most popular toys in America!

Week Three: Using "Wh" questions as a guide, re-write, revise or summarize target article using vocabulary words, previous and new, checking for comprehension

Week Four: Using varied types of activities, review target words, then post-test. (Jeopardy, Blurt, BINGO)

PRE-TEST SCORE AND POST-TEST SCORES FOR UNIT ONE "SILLY PUTTY" TIER TWO VOCABULARY
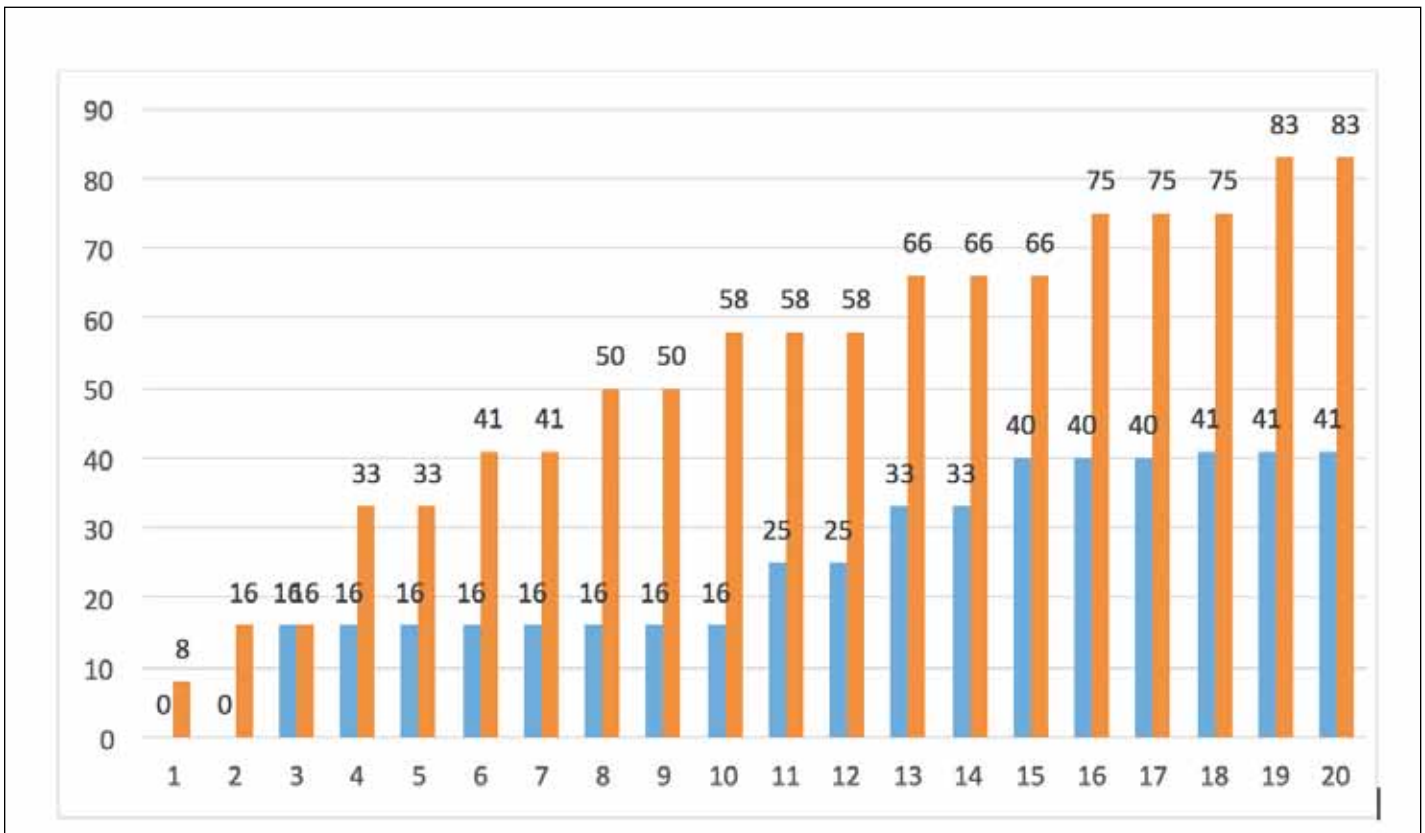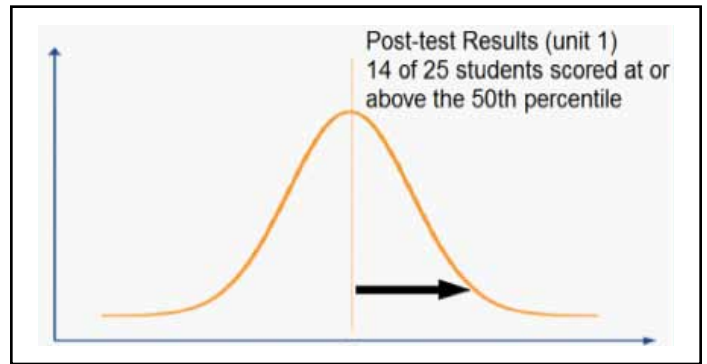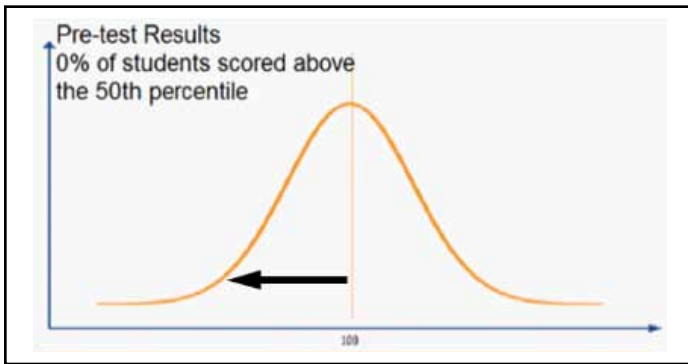
Pre-test scores are blue; Post-test scores are red.

DISKoveries

SUBSCRIPTION SOFTWARE

By Joan Tanenhaus

Subscription software is now a common and often used software licensing and delivery model. Taking advantage of cloud computing and iPads and tablets, it allows the subscribed users to access the program at any time from any place, using their desktop or laptop computer, Mac or Windows, tablet or phone. Content is no longer static and confined to what is available from the traditional installed CD, DVD or download - it is constantly changing, updating and expanding. Again, being cloud-based, they have online tracking and record keeping options that allow teachers to monitor work done at school or at home and to individualize student or class assignments. Traditional software, as we have been using the past 30 years, is sold as a perpetual license with an up-front cost. In contrast, subscription software has a subscription fee, usually paid monthly and/or annually.

Some of our long-time favorites are now available as subscription-based software and this DISKoveries will explore just a few of them.

Boardmaker Online (www.board-makeronline.com) With the new Boardmaker Online, users from all disciplines can create, edit, assign, adjust access (mouse, touch, eye-gaze, switch) and

Boardmaker Online (www.boardmakeronline.com)

print activities from anywhere, at any time- no disk or install is required. Just log in on any computer, tablet, iPad or Tobii Dynavox T-Series device. BMO allows teachers and therapists to share students, collaborate with others in the district and access all on the iPad. There's automated Common Core standards and IEP aligned data and usage tracking and reporting. Parents can log in to their child's account, extending learning beyond the school day (on weekends, holidays and school vacations, too), and

for the students, the activities are fun, motivating and always available. Most of all, it provides consistency between all. You can upload new activities or those you've created with your older version of Boardmaker onto the Boardmaker Online Community and share them with people everywhere. You can also find lots of activities there, including templates and samples, as well as Premium Activities, available only for subscribers. Templates are available for all kinds of activities and learning areas (books, games, language activities, math, etc.) for supported or independent use, and all can be customized and individualized. There is also free, live online training, as well as recorded trainings that can be viewed at any time, along with a Help & Training Center with tutorials, how-to videos, implementation ideas and much more. Boardmaker Online is available as Personal, Professional and District subscriptions and a free, 30-day trial is available.
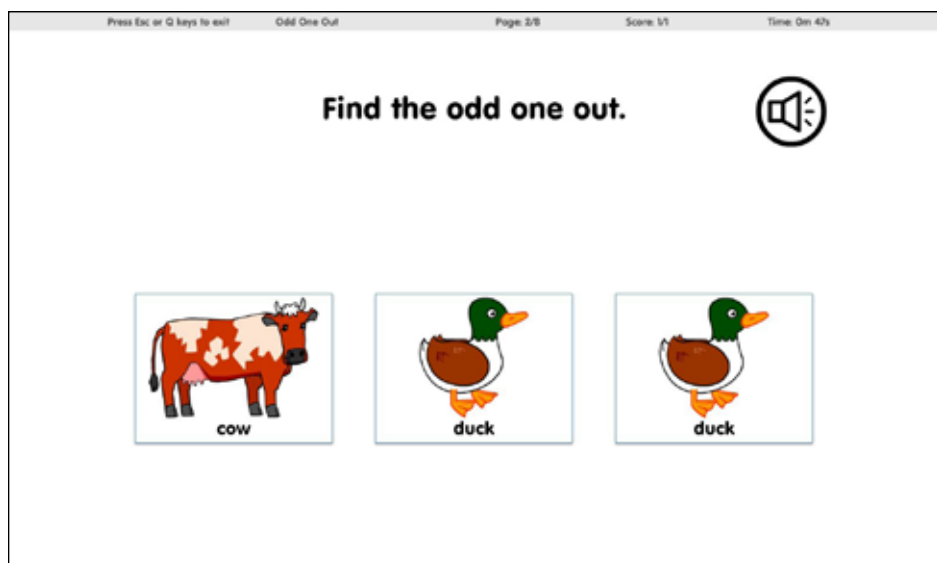
HelpKidzLearn (www.helpkidzlearn.com) HelpKidzLearn is an online subscription service for teachers, therapist and parents with accessible learning games and activities that can be used with Mac and Windows computers and SmartBoards. These activities can be accessed using mouse and keyboard, one or two switches, touchscreen, joystick/roller ball

and eye-gaze. They are designed for children with severe and complex learning needs at a pre-literacy or early literacy level. There is a wide range of activities, including experiential (encouraging look and listen), tracking, early cause and effect, errorless activities, turn taking and much more. They help provide a context for language, teach early timing skills (waiting for something to appear on the screen before reacting) and developing mouse skills and the use of a touch-screen. New activities are constantly being added, with lots of seasonal fun. Activities are available in areas such as Early Learning (cause and effect), Games (SNAP, Snakes and Ladders, memory pairs, timing skills, errorless choice-making, and more), Stories and Songs (5 Little Ducks, Counting Songs, sequences, etc.), Creative (coloring, painting, face-maker, build a snowman and much more) and Find Out (matching, scanning, talk to the parrot, follow a shopping list, match letters to letters on the keyboard, use a giant calculator and more). Annual subscriptions are available for one user, five users, site and district. There is also a free user subscription that provides access to 10 activities. The HKL website is not accessible on iPad or Android tablets, but if you are interested in that use, you can purchase the individual activities as apps from the Apple App Store or from the Google Play Store. Visit the website to find out more about the wide range and large number of activities.

ChooseIt! Maker 3 (www.helpkidzlearn.com) Also available from Help-KidzLearn.com, ChooseIt! Maker 3 is an online subscription that lets you create personized learning activities, like cause and effect, question and answer activities, stories, assessment materials, games, quizzes and more, with photos, symbols, text and sounds. It includes a library of over 30,000 symbols and pictures, including SymbolStix symbols, Widget symbols and Inclusive Technology pictures and symbols. You can also add your own images from your computer
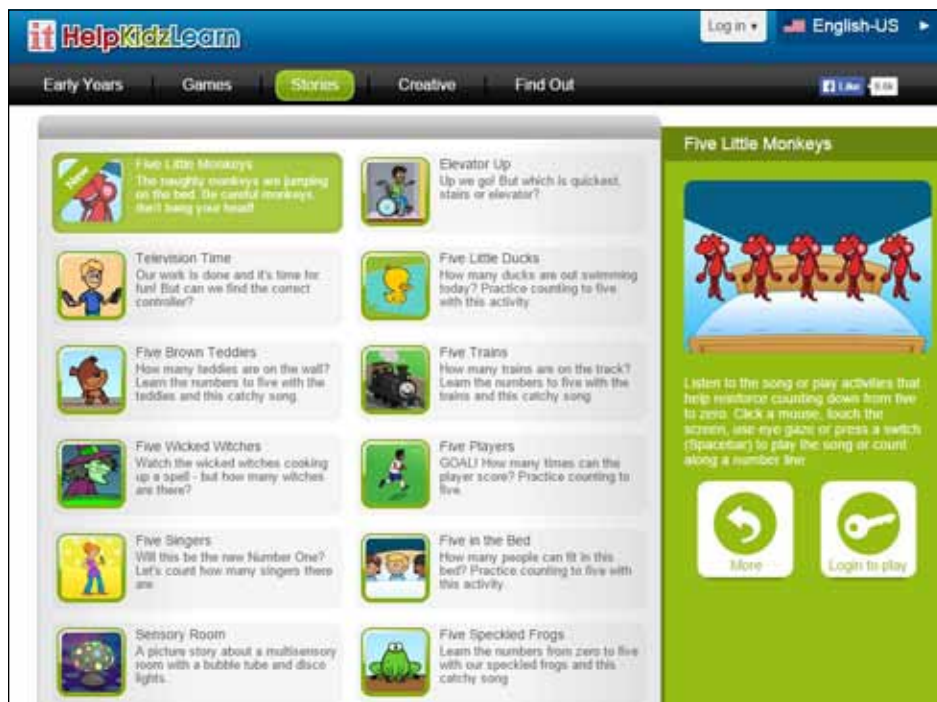
HelpKidzLearn (www.helpkidzlearn.com)

ChooseIt! Maker 3 (www.helpkidzlearn.com)

or from the Internet. Rewards, which can be individually chosen, are built into the activities and are very motivating. Included, also, are three sample activities, all usable with Windows, Mac or down-loaded to your iPad and Android tablets using the Free ChooseIt! Maker 3 apps. Your activities can be accessed by touch-screens, mouse and keyboard, one or two switches and eye gaze. There is record keeping and tracking of responses. Annual subscriptions are available for one user, five users, site and district. Visit website for additional information and to see examples of some of the activity types that can be created.

A-Z Reading (www.readinga-z.com) This is a widely used subscription-based

learning program that supplements classroom reading programs. It contains reading lessons, decodable books, reader's theater scripts, worksheets, flashcards, fluency passages, phonological awareness and phonics lessons, vocabulary books, graphic organizers, word sorts and assessments for 29 levels of difficulty. There are more than 1,000 leveled books in multiple genres and formats, with guided reading lesson plans, all correlated to state and Common Core Standards. Books are printable and projectable. English, Spanish, French and British English versions are available. Annual subscriptions are available for individual classrooms or for 10+ classrooms. Visit the website for more detailed information and to also learn about related subscription-based programs in other areas (Science, Vocabulary, Writing and more). If you have an iPad, A-Z Reading has a group of 17 free iPad apps, one storybook for each of the first 17 reading levels (aa-p), in addition to hundreds of other books. Look for them by searching LAZ Readers in the App Store.

Scholastic Storia School Edition (www.scholastic.com/storia-school/) Scholastic Storia gives every student in your school unlimited school access to 2,000 quality eBooks for grades PreK-6, including literary classics, modern titles and nonfiction and informational texts to support Common Core State Standards. Digital enhancements include Reading Challenge quizzes at the end of every eBook that record results; the Storia Dictionary with age-appropriate definitions; Reading tools (highlighter and note-taking features); Read-to-Me books for young readers feature lively narrations and highlighted text; Enriched eBooks have learning activities like puzzles and word games to help build comprehension and retention. Some also have Activity Cards - short digital guides. Annual subscription gives unlimited, simultaneous access to the 2,000 eBooks with individual log-ins for all students

Numbers (www.playosmo.com)

05Touchtonic Letters: Touchtronic Letters (www.juniorlearning.com)

to read their eBooks at home on most devices with an Internet connection.

PART II: MORE PLAY AND LEARN WITH MANIPULATIVES FOR THE IPAD

DISKoveries, in the August/September 2015 issue, reviewed some new manipulatives that work together with the iPad. Following are some updates and new products that continue to expand the use of the iPad for play and learning.

Osmo, reviewed in detail in August/September 2015, is a gaming accessory for the iPad that can be played by children ages 4 and up and comes with assorted games that work with an iPad Mini and iPad version 2 or higher. The Osmo package comes with a reflective mirror for the iPad camera, a white iPad stand and the game pieces. The games reviewed previously included **Words, Tangram, Newton** and **Masterpiece**.

Numbers (www.playosmo.com), the newest Osmo game, contains two sets of tiles - one with 20 two-sided digits (two each of 0-9, one in red and one in orange) and one with 20 two-sided dots (ten 1s, six 2s, and four 5s). With an "under the sea" theme, the game encourages children to release captured fish as they arrange the tiles to make number combinations and complete tasks and levels. Children explore and experiment with number concepts as they learn about counting, addition, subtraction and multiplication. The app starts with the Count mode, which uses the dot tiles, and as the game is played, other levels are unlocked and new modes (Add, Connect and Multiply) become available (and played with the number tiles). There is a feature in the settings that lets you unlock the modes so that users can begin playing at more advanced levels if they are older. You are also able to use the apps with multiple users by creating online accounts/profiles for each user. Numbers can also be played with more than one player to encourage collaboration in problem solving. Osmo Numbers will be compat-

06Touchtronic Numbers: Touchtronic Numbers (www.juniorlearning.com)

ible with the manipulatives in Houghton Mifflin Harcourt's leading math programs, Go Math! and Math Expressions. HMH will provide Osmo activity guides that will suggest games and activities that integrate HMH with Osmo, providing further extension of school learning.

Junior Learning Touchtronic Sets (www.juniorlearning.com) With Junior Learning's new products for the iPad2 and later, users can touch, feel, manipulate and handle letters and numbers - independently, with family or friends, within the classroom or at home - and use them in conjunction with their literacy apps. Good for ages 3 and up, each of the letters and numbers has sensors on the back and a unique signature that is recognized by the iPad. The iPad recognizes the difference between similar shaped letters and numbers, as well as knowing if the letter or number is upside down. Feedback is provided to the users. The set of letters contains 26 lower-case, color-coded letters with consonants in blue and vowels in red. The set of numbers has 10 numbers in purple (0-9) along with six orange symbols for

addition, subtraction, multiplication, division, equals and greater than/less than. Each set has learning games that are free app downloads. Included also is a drawstring carry bag to help keep the pieces together. Available separately, is a placeholder that helps organize the letters and numbers during play. For group play, these manipulative can be used for turn-taking activities, team play and can set a context for teacher or therapist for language, communication and conversation.

Touchtronic Letters (www.juniorlearning.com) This set of 26 letters and two apps provides activities to learn and practice recognizing lower case letters, letter-sound relationships and beginning CVC words. The first app, Touchtronics ABC's, contains three literacy activities. Mystery Doors: Place any letter on the iPad where directed to hear the name of the letter, the sound it makes and the name of an object that begins with that sound. The letter will appear on screen, along with the object's picture. Letter Bubbles: Pop bubbles by matching the beginning letter sound (i.e., shows

picture of Cat - place C on iPad). Word Machine: Touch the missing letter on the screen to complete the CVC word. (Users see a picture, two of three letters of the word and hear "I'm a dog - what's my beginning letter sound?") The second app is 3 Letter Words (users stamp letters to make words - which are then sounded out (c-a-t) and shown). This is a good activity for showing how changing a single letter/sound at the beginning, middle or end of the word changes the word meaning.

Touchtronic Numbers (www.junior-learning.com) This set of numbers and math symbols contain two apps. The first, Touchtronic 123's has three activities: Counting Train (how many passengers?), Value Handcar (see two numbers with accompanying dots - hear "Is it greater, less than or equal?") and Grain Factory (place the missing number in the equation—i.e., 6 - 3= ?). The second app is Place Value Fish (errorless activity) Place any numbers in hundreds, tens and ones areas and see that many beads, blocks or fish. The quantity will be spoken. You can also place a + or – symbol to increase or decrease the place value by 1s, 10s and 100s.

Touchtronic Placeholder (www. juniorlearning.com) This is a heavy, coated, double-sided cardboard mat - semicircular in shape. One side has all the letters of the alphabet in red and blue (to match the pieces) and the other side has all the numbers and math symbols in purple and orange. The iPad is set in the middle. It organizes the letters and numbers during play, reinforces correct sequencing and can be used as a matching activity. It's very helpful in teaching children to search and find the letters and numbers.

Another set of manipulates, created by Tiggly (www.tiggly.com), was also reviewed in the DISKoveries that appeared in the August/September 2015 issue of Closing The Gap. Tiggly sets include Tiggly Shapes, Tiggly Math and

Touchtronic Placeholder (www.juniorlearning.com)

Sesame Street Alphabet Kitchen (www.tiggly.com)

Tiggly Words, each with a series of apps for the iPad.

Sesame Street Alphabet Kitchen (www.tiggly.com) is a new app that works with the five vowels of Tiggly Words. In this app, created by Tiggly and Sesame Street Workshop working together, Cookie Monster encourages children to create three- and four-letter words by adding the Tiggly vowels. Children are presented with two of the three letters and place one letter in the missing space to hear the letter sounds and make cookies that picture the word. Children can color the cookies, take pictures and feed them to Cookie Monster. (All of the Tiggly apps can also be played without the manipulatives, so if they sound interesting, check them out in the Apple App Store.) Watch for Tiggly Storybook (will work with Tiggly Shapes) and a new subtraction app (for Tiggly Math) coming in early 2016.

Classic Match Foosball for iPad (www.newpotatotech.com) For the older players, young adults and adult game players who want more action, a competitive sport and an age-appropriate arcade game, this Foosball table (11 ½" by 6" x 3") is a good choice. It sits on a table, desk, lap tray - where ever you want - and has eight fully functional control bars with scoring markers on each side – just like a real tournament table in miniature. The iPad rests firmly on the top, held by a bumper and is Bluetooth compatible. The app, downloaded free from the App Store, will find your Foosball table and connect automatically. One-, two-, three- or four-person play is available and, if preferred, one side can play against the computer, with three levels of play difficulty. There are two types of play: Classic Match (untimed) and Timed Match. Pick your favorite team, country and opponent and customize the players' outfits. There is instant replay after each score, a scoreboard, crowd sounds, music and even a "thunk" with each goal, all from the iPad. Good motor and visual skills are required to play the game, which is

Classic Match Foosball for iPAD (www.newpotatotech.com)

highly motivating for social interaction, problem-solving and turn taking. Even if you are familiar with the Foosball game and rules, it is suggested that you first download the free app and try the game with the iPad, using touch, to evaluate its difficulty level before purchasing the add-on table. (Be sure, also, to purchase the table that is compatible with your iPad model.)

MAINSTREAM MEDIA FOR SPECIAL NEEDS

Changes similar to those happening to software are also happening to music and to the video game industry. Music can now be purchased on CDs or downloaded from the Internet. Video games are also still available for entertainment systems, like the Wii, Xbox and Playstation, and many can now be just download, as well. Following is a variety of mainstream media that is available and that is fun for all ages and good for socialization and peer interaction.

Emily Arrow: Storytime Singalong Volume 1 (www.emilyarrow.com) This CD is Emily Arrow's debut album in her self-created music genre that she calls KidLit Tunes, for children ages 2-10. All of the songs are based on correlating books and feature simple follow-along lyrics based on these favorite storybooks. There are eleven songs on the CD – seven were inspired from books like "The Dot Song" by Peter Reynolds, "Louise Loves Art" by Kelly Light, "The Curious Garden" by Peter Brown, "Are We There Yet, Yeti?" by Ashlyn Anstee, "I Am Yoga" by Susan Verde, "One Day, the End" by Rebecca Kai Dotlich and "I Wish You More" by Krouse Rosenthal & Tom Lichtenheld. Four of the songs by Emily are original tunes based on literacy topics (e.g., "Books! Books!" and "Poem in Your Pocket"). As Emily says, "With Storytime Singalong, I created 'sing-along' songs that encourage kids, parents, teachers, caregivers and librarians to enjoy together – through the language of music, the power of words and the beauty and art of book illustrations." Visit

Emily's website to see sample videos and hear some songs from the album.

Happy Kids Songs and Happy Kids Songs Workbook (www.happykidssongs.com) Available from iTunes and Amazon (and not on CD), this new music series by Dr. Don MacMannis contains eight albums of music, each with five songs. Album titles are "Friends & Sharing," "Social Skills & Bullying," "Feelings & Fears," "Practice & Success," "Talking & Listening," "Manners & Characters," "Happiness & Attitude" and "Respect & Responsibility," with lyrics that tap into issues that 4- to 8-year-olds face. The music is upbeat, the words are empowering and the songs are sung by singers of all ages and accompanied by a wide variety of instruments. Visit the website to listen to sample songs and download some free songs, too. In addition to the music, there is a workbook filled with 124 pages of hands-on activities that include the lyrics to the songs, coloring pages, a variety of games and puzzles designed to provide useful tools for children that are related to each song. There are also over a hundred lessons and activities for parents and teachers to share with children, also related to the topics introduced in the songs. The workbook is available from http://www.amazon.com/Happy-Kids-Songs-Workbook-Hands-/dp/1497451868

Just Dance 2016 (Ubisoft.com) This classic series of games has a new volume for 2016, which is available for PS4, Xbox One, Wii U, Wii, PS3 and Xbox 360. This is a dance video game, containing fun soundtrack and dance routines with single and multiplayer modes. After selecting a song, players are presented with an on-screen dancer and their choreographed routine. Players are judged on a ranking scale for the accuracy of their moves. Players can personalize their workouts with their favorite tracks or play a ready-made thematic playlist. Through the years, different modes of play have been designed, and in 2016, the following new modes were

Emily Arrow: Storytime Singalong Volume 1 (www.emilyarrow.com)

added: Dance Party mode (players can work together cooperatively to achieve a high score or play against each other); World Video Challenge (videos can be uploaded to the Just Dance community for competitive play); and Dance Quest (players unlock quests to beat the game). Lots of fun, movement and interactive play. **Just Dance Disney Party** features the most popular songs from Disney movies and shows. Users can put themselves in the hit song, with gameplay inspired by scenes from the Disney Channel shows.

Hasbro Family Fun Pack (Ubisoft.com) Four classic board games are available together in one game pack for PS4 and XBoxOne. Play with your family and friends on your own couch or with people from around the world. With Scrabble, challenge your opponents in person or online, while strengthening your word skills with new game modes. Trivial Pursuit Live features unique question formats and diverse round types. Classic Monopoly is updated with in a new 3-D world, and with Risk, you can compete with players from around the world in the classic game of global domination.
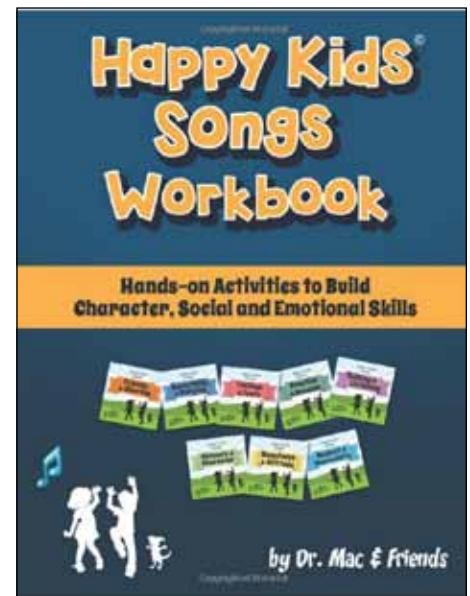
Happy Kids Songs and Happy Kids Songs Workbook (www.happykidssongs.com)

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

Partner-Augmented Input in the Classroom:

Bringing Modeling to Your School

Augmentative and alternative communication (AAC) can be invaluable in allowing children with complex communication needs to express themselves at school. However, simply giving a student a communication board or device will not make him or her a communicator any more than giving a girl a piano makes her a musician or giving a boy a basketball makes him an athlete. Rather, to achieve communicative competency, students need instruction in the language of their AAC systems.

An evidence-based strategy for teaching the language of AAC is partner-augmented input (PAI), which is also known as natural aided language, aided language modeling, or aided language stimulation. This is a modeling strategy whereby communication partners (e.g., teachers, instructional assistants, speech-language pathologists) use the child's AAC system themselves by pointing to the symbols on the child's communication board or device while simultaneously talking. This strategy can help students understand and use symbols, as well as improve their abilities to put symbols together to make phrases and sentences.

Although pointing to pictures while talking may be a familiar idea, having awareness about a strategy alone does not typically result in being able to use it. Many teachers, instructional assistants (IAs), speech-language pathologists (SLPs) and other school staff require training before they can model effectively in the classroom. The discrepancy between awareness and use can be explained by examining levels of impact. Only at the application and problem solving level can school staff transfer skills to the natural environment and use them along with other strategies in their repertoires. Simply attending an in-service may be sufficient for realizing the importance of a technique; however, reaching the application and problem solving level requires the use of multiple training elements (Joyce & Showers,

MATTHEW R. BAUD, MS, CCC-SLP, has been working with AAC for the past 13 years. He currently is the Assistive Technology Coordinator at Niles Township District for Special Education (NTDSE) performing evaluations, trainings and coaching communication partners. Matthew also has his own AAC private practice working with individuals with complex communication needs from birth through adulthood. He is an adjunct professor at Saint Xavier University where he teaches a graduate course in AAC and has presented at national and state conferences. mbaud@ntdse.org

JILL E. SENNER, PhD, CCC-SLP, is a speech-language pathologist with almost 20 years of experience working with children with complex communication needs. She is the owner/director of Technology and Language Center, Inc. where she specializes in providing augmentative and alternative communication (AAC) and assistive technology (AT) services, including assessment, consultation and training, and workshops/lectures. Dr. Senner has presented at numerous national assistive technology conferences and has taught graduate courses in AAC and swallowing disorders. She has published research in the areas of AAC, siblings and disability, and swallowing disorders in cerebral palsy. talcaac@gmail.com

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1980). Furthermore, staff learning PAI as a new skill will need more intensive instruction to achieve mastery than staff refining previously learned skills.

In a school setting, PAI can be done throughout the school day, similar to a total communication classroom in which a teacher simultaneously talks and signs as he or she is teaching.

To teach communication partners to use PAI in the classroom, we use an 8-step instructional model proposed by Kent-Walsh and McNaughton (2005), which includes the following training elements:

1. Pre-test and Commitment to Instructional Program
2. Strategy Description
3. Strategy Demonstration
4. Verbal Practice of Strategy Steps
5. Controlled Practice and Feedback
6. Advanced Practice and Feedback
7. Post-test and Commitment of Long-Term Strategy Use
8. Generalization of Targeted Strategy Use

Let's examine each of the steps and how we use them to instruct school staff to provide PAI.

Most frequently, we train all staff members working in a given classroom together. Before any training occurs, whenever possible, pre-test information should be collected from each staff member. Videotaping staff in the classroom can be enormously helpful because instructors can later watch the videos with staff and provide feedback regarding strengths and areas needing improvement. We developed a self-assessment questionnaire that we occasionally use along with videotaping.

Kent-Walsh and McNaughton (2005) suggest that participants who make a commitment to training are more successful in acquiring and implementing new skills, so this is also included in the first step. We typically have staff sign a written commitment statement as part of training; however, oral assurances can also be beneficial.

S   **Slow Rate -** Slow speech rate. Speak in slow, clearly articulated manner.

Mo   **Model -** Say words/phrases that are related to the contextual information available while pointing to pictures on the child's board or device. Parallel talk (i.e., describing what the student is doing as he or she is doing it) and self-talk (i.e., talking about what you're doing as you're doing it) are helpful tools for modeling. Think about modeling as providing the color commentary for ongoing classroom activities.

R   **Respect and Reflect** - Provide the words to code the child's wants, feelings and intended messages. When the child communicates something through gesture or word approximation, model a word or phrase to communicate the same thought or feeling without making the child repeat him or herself. For example, if the child points to a water fountain, the adult might generate "DRINK. WANT DRINK."

R   **Repeat** - Frequently repeat utterances.

E   **Expand** – Repeat and rephrase, building upon your own single word utterances by adding one to two words to provide a more complete phrase or sentence. You can build upon the child's communication as well (i.e., if he/she uses one word or symbol such as "BUBBLE" try expanding the comment to two words, for example, "Yes, that's a BIG BUBBLE.")

S   **Stop** – Provide an expectant pause to allow the child time to respond.

We conduct a single session outside of the classroom to introduce steps 2-5. Institute days or early release days work well for this purpose. For schools that contract staff outside of school hours, the pull-out training can be split into two sessions provided before or after school. To provide the theory behind PAI, as well as a description of the strategy, we conduct a brief lecture and provide staff with a handout about PAI. This handout is available as a free download from the Links and Download tab of the Technology and Language Center, Inc. website. A free, 20-minute online video from the DynaVox Implementation Toolkit, entitled Partner Augmented Input – Instructional Video (DynaVox Technologies, 2008), is available for groups to use as an alternate to live lecture. The video includes a description of the strategy, as well as clips of PAI being provided that can be use with strategy demonstration. The video can be paused by instructors to emphasize key points. To enhance strategy demonstration, we often show additional videos of successful classroom modeling so staff can see that the strategy can be used effectively in educational settings similar to their own.

Verbal practice requires staff to describe and explain the steps involved in using PAI. This step can help ensure comprehension and facilitate development of automaticity in participants (Kent-Walsh & McNaughton, 2005). The SMoRRES (slow rate, model, repeat, respect and reflect, expand, stop) mnemonic (Senner & Baud, in press) helps staff remember the steps involved.

The staff members label and describe each step aloud during the training with guidance from the instructors.

Controlled practice first occurs in the initial training session to allow staff to practice PAI without the distractions and pressures of the classroom. Each staff member is provided with a copy of the student's communication board or device. Emulation software can be
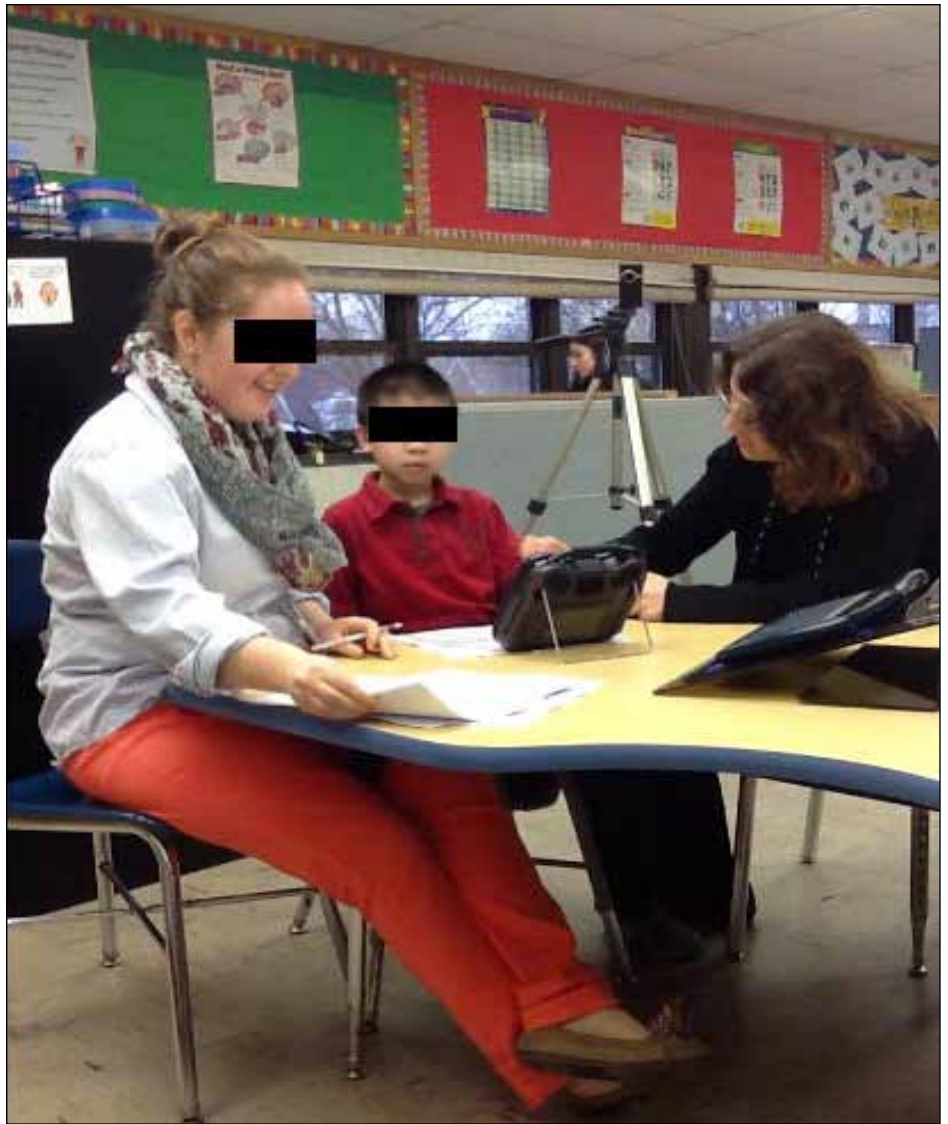
Caption: Instructor providing strategy demonstration in the classroom.

used when additional devices are not available. Staff members are given the opportunity to model a variety of practice phrases, as well as to generate phrases based on scenarios provided. The scenarios relate to activities in the classroom and require staff to think about what types of parallel or self-talk they might provide (e.g., "The student takes a bite of cracker during snack. What could you model on the speech-generating device?"). A 45-minute online video produced by Infinitec (2013) is another resource available to instructors for use in guiding teams through steps 2-5 during the initial training session.

The remainder of the training occurs right in the classroom during regularly-scheduled activities, to minimize time teachers are away from their students and to promote generalization. No changes to lesson plans are required nor are any special communication boards or displays used. During the first classroom visit, strategy demonstration is repeated, this time by an instructor who provides PAI on a student's board or device during a classroom activity.

Coaching, a live observation and feedback cycle in the natural environment, is particularly useful in helping staff members transfer learned skills to

the classroom. The provision of coaching by instructors is an important element in the implementation of both controlled and advanced practice.

During the next classroom visit, controlled practice is repeated, this time in the natural environment. The instructor sits next to a target staff member to provide immediate suggestions for modeling and give constructive feedback. The instructor will typically switch to coach another staff member after about 30 minutes so that everybody working in the classroom receives the same amount of controlled practice.

Over the following weeks, instructors gradually fade support, providing school staff opportunities to practice PAI during classroom activities. At the conclusion of training, post-test data can be collected (i.e., videotaping can be repeated) to determine the effectiveness of the training and possible need for additional support and instruction. We developed a PAI monitoring form to sample staff utterances and use this to calculate percentage of utterances modeled. We then compare the percentages between pre- and post-test to document progress. Finally, staff members are observed in activities not targeted during instruction to assess generalization of PAI in other classroom activities.

Because all members of a classroom, department or school collectively participate in the training, staff members can serve as supports for one another. However, following the conclusion of training, team members are encouraged to stay connected with other teams and instructors through social media. The Partner-Augmented Input Facebook group provides a forum for sharing resources and successes and offers members a way to seek support from peers when facing implementation challenges. Some of the resources demonstrated during training sessions, such as motivational posters for the classroom, can be downloaded at no cost from the Partner Augmented Input Pinterest board.

A follow-up, several weeks after the conclusion of training, is recommended to assess maintenance of PAI use in the classroom. In our follow-up, staff members complete a questionnaire, which asks about changes they noted in themselves, changes they noted in their student(s), as well as the things they liked about the training and suggestions for improvement. On such follow-up questionnaires, staff members frequently report finding coaching a preferred and useful training element.

In a recent research study, the 8-step instruction model described above was used to train a self-contained classroom teacher, speech-language pathologist and two instructional assistants in partner-augmented input. All staff increased modeling on students' speech-generating devices between pre- and post-test measures across activities (Senner & Baud, in press). Benefits to the students including increased frequency and independence of communication were also observed.

Evidence suggests that communication partner instruction has positive effects on communication performance of individuals using AAC (Kent-Walsh, Murza, Malani, & Binger, 2015). In fact, it has been suggested that communication partner training can be considered an effective intervention strategy for individuals using AAC.

Bringing modeling to your school by training classroom communication partners to provide PAI can be a beneficial step towards encouraging AAC use in the classroom.

RESOURCES

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- Partner-Augmented Input in the Classroom Facebook Group https://www.facebook.com/groups/PartnerAugmentedInput/
- Partner-Augmented Input Pinterest Board https://www.pinterest.com/talcaac/partner-augmented-input/
- Technology and Language Center, Inc. http://talcaac.com/

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From Paper to Electronic Creating Electronic Documents from Printed Materials
MONDAY, APRIL 11, 2016
1:00 PM - 2:30 PM CDT

This session will cover a variety of solutions for converting and importing printed materials into iPads, computers, Chromebooks and other tablets by utilizing scanners, document cameras, apps and computer programs and cameras on cell phones.

Topics covered will also include options for saving in different file formats, text-to-speech and typing or annotating on documents. Need to type on that worksheet, have the passage and questions read aloud, or simply need an on-the-fly solution for reading printed materials? We'll discuss that. Quality and cost comparisons for all platforms, as well as minimum hardware requirements for devices and computers, will also be discussed.

DAN HERLIHY

Top Ten List! Using Technology for Students with ASD for Successful Educational Programming!
THURSDAY, APRIL 28, 2016
10:00 AM - 11:30 AM CDT

Are you wondering…what does it REALLY take for successful school programming for students with ASD? This fast-paced webinar will review essential elements using various modes of technology for students with ASD in a "Top Ten List" format.

Many educational professionals struggle with developing appropriate programming for students with ASD, primarily due to difficulty understanding their unique learning, thinking and processing skills. Various modes of technology can increase this understanding, as well as to help determine appropriate instructional strategies using various modes of technology. Come discover these "Best Practice" principles to guarantee your students' success!

SUSAN STOKES

Using iTechnology as Evidence-Based Practice! Visual Directions for Students with ASD
MONDAY, MAY 16, 2016
1:00 PM - 2:30 PM CDT

This fast-paced webinar will give participants information and resources for using the evidence-based practice of visual directions with iPads, iPods and iPhones to meet the unique learning and behavioral needs for students with ASD.

Apps that can be individualized to give the student with ASD visual information to increase comprehension and acquisition of numerous skills, including self-help, school routines, academics and behavior management, will be shared.

(Participants should have a general knowledge of iTechnology device "basics," including accessories and access tools, for making these systems user friendly for both students and adults).

SUSAN STOKES

WEBINAR PRESENTERS:

DAN HERLIHY, AT/Technology Resource Specialist, Connective Technology Solutions, Inc., Hoosick, NY.

SUSAN STOKES, M.A., CCC-SLP; Educational Autism Consultant and Trainer, Bloomington, IN

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product spotlight

eSight – Making Blindness History

ELECTRONIC GLASSES THAT LET BLIND PEOPLE ACTUALLY SEE

eSight is the only patented, assistive device of its kind anywhere in the world. eSight is wearable, handsfree, portable – and most importantly, eSight is a non-surgical device. eSight is currently registered with the United States FDA and Health Canada.

eSight Corporation is a well-financed startup with a simple mission: to Make Blindness History.

DOES ESIGHT REALLY WORK?

To date, hundreds of blind people have regained their vision thanks to eSight.

They include blind individuals:

- With many different eye conditions and injuries.
- Whose visual acuities have been dramatically improved (from a range of 20/200 to 20/1200 – to near 20/20).
- Whose ages range from 6 to 94 years.
- From many different walks of life.

- With many different lifestyles, including those with very active independent lives.
- Who now, thanks to eSight, can lead very active lives independently carrying out activities of daily living, and often return to work to earn a living.

eSight enables blind people to actually see. What they do with their newly restored sight is up to them. This includes virtually all activities of independent daily living such as:

- Seeing the faces of loved ones, in some cases for the first time
- Reading
- Using a computer or smartphone
- Watching TV
- Working in an office
- Going to school or university
- Working in a factory
- Viewing events
- Arts and Crafts
- Cooking
- Walking
- Playing sports
- Traveling independently
- Resuming previously abandoned hobbies (cards, woodworking, etc.).
- Flying a plane (yes, we actually have one such example)
- And so much more.

eSight does so much more than restore sight. eSight restores a blind person's independence, confidence, self-esteem and freedom. This is about changing someone's life, it can change a blind person's life.

Blind individuals simply need to try eSight to see if it works for them without any risk or cost.

LEARN MORE

Lend your Eyes to the Blind

A new app makes life easier for the blind, by connecting them with sighted helpers through a smartphone app. This allows the blind to handle big and small tasks, while sighted get the joy of helping someone else in an easy and informal way. The app is called Be My Eyes and could revolutionize everyday life for the blind.

It only takes a minute to choose the right tin can from the shelf, look at the expiration date on the milk or find the right thing to eat in the fridge if you have full vision, that is. For visually impaired individuals, smaller tasks in their home can often become bigger challenges. This new app hopes to change that!

Through a direct video call, the app gives blind people the opportunity to ask a sighted volunteer for help with tasks that require normal vision. The blind person "borrows" the helper's

eyes all through his or her smartphone. The sighted helper is able to see and describe what the blind person is showing the sighted helper by filming with the video camera in the smartphone. That way, by working together, they are able to solve the problem that the blind person is facing.

A test version of the app has been well received by the blind community. John Heilbrunn, himself blind and vice chairman of The Danish Association of the Blind, sees it as great opportunity to get help from a network of volunteers:

"The app makes it possible to get help at times where it might be inconvenient to get help from neighbors or friends, and you don't have to go apologetically and ask for help."

The idea behind Be My Eyes originates from the Danish 50-year-old furniture craftsman, Hans Jørgen Wiberg, who started losing his vision when he was 25. His wish is that the app will make the everyday life of blind people easier and to be new flexible opportunity to volunteer:

"It is flexible, takes only a few minutes to help and the app is therefore a good opportunity for the busy, modern individual with the energy to help others," Says inventor Hans Jørgen Wiberg.

The Be My Eyes app is free and available in the AppStore.

LEARN MORE

A New Approach to Consuming Digital Content – Listen!

Capti Narrator is designed to read your Web pages, documents and un-protected ebooks from browsers, Dropbox, Google Drive or Clipboard with naturally-sounding text-to-speech voices, so you can listen to everything you want to read.

WHO SHOULD USE CAPTI?

- Students and instructors who want to be more productive
- Students who learn better through audio over visual presentation
- Students with print disabilities and their instructors
- English language learners and ESL/ELL/ESOL instructors
- Students learning a foreign language and their instructors
- School personnel doing a significant amount of reading

FEATURES

FREE VERSION

- Text to Speech
  Turn any text into an audiobook: hands-free and eyes-free.
- Save for Later
  Save documents and Web articles for later in your Playlist and access it even offline; synchronize your Playlist and your reading position across all your devices.
- Sophisticated Navigation
  Jump to the next/previous word, sentence, paragraph, heading, page or a search keyword.

- Screen-Reader Support
  Extensively customized for JAWS and NVDA (Windows) and VoiceOver (iPhone, iPad)

PREMIUM VERSION

- Full-Text Playlist Search
  Find the best-matching tracks in your Playlist; searching inside a track is free.
- Images in Text
  View images in tracks created from EPUB, PDF, DOC(X), and other documents.
- Word Translation
  Right-click any word in the track to translate the word into up to 26 languages (Windows, Mac and Chromebooks only).
- File Size Limit
  Add documents and books that are up to 100MB in size; default limit is 10MB.
- Word Challenge
  Play Word Challenge, a fun game of language knowledge, helping you learn the English language based on your own texts.
- Create Playlists
  Stay organized by saving tracks into different playlists. Only one playlist is available by default.

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