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Part 2: The Total Story of Total Talk

A Behind-the-Scenes Look at the Creation of an Innovative New Speech Generating App

Tango Talk creator, Richard Ellenson, and the first Tango Talk user, Thomas Ellenson, enjoying a moment that reminds us that one of the things that great communication can build is a great relationship.

RICHARD ELLENSON Prior to introducing Total Talk, Richard was founder and CEO of two assistive technology companies (Panther and Blink Twice) that helped transform and reimagine the field of assistive technology for people with disabilities.

Richard is also the father of an 18-year-old son, Thomas, who has cerebral palsy. He has worked tirelessly to create awareness about people with disabilities and to share stories about their vibrant lives. He and his son have been featured as ABC World News People of the Year, on CNBC's Squawk Box, in a New York Times Sunday Magazine cover story and as a feature on ESPN's E:60.

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In the last issue, we covered the first five of ten needs addressed by Total Talk. I also shared that my perspective was built on five experiences.

- An early career in advertising, where I learned "everything communicates."
- Years of involvement in tech, which provided strong insight into the user experience.
- Spending time in the classroom and seeing teachers struggle with complexity.
- Creating the Tango! and building an innovative AAC device that preceded iPads.
- Most importantly, being the father of a son with CP.

That experience led to developing Total Talk, a SGA (speech generating app) that offers not only strong generative language (developed in collaboration with Pati King-DeBaun, Caroline Musselwhite and Mark Surabian) but also a new approach to communication that provides engaging tools to help you adapt to different settings.

I then covered the first five needs addressed by Total Talk, not simply talking about the app's features, but also the perspective from which they were created. They were:

1. **The fact that people only have one chance to make a first impression. Addressed by Persona PCS symbols.**

2. **The need for difference communication approaches for different communication moments. Addressed by Total Talk's multimodal communication approach.**

3. **The need to model not simply language, but also independence. Addressed by Tele-prompt, a free companion app that allows you to prompt someone from across the room using your iPhone.**

Thomas Ellenson filming a news piece about his love for theater and the performances he has done using Total Talk. Worth noting that any device opens a doorway - but it's talent, spirit, and perseverance, and love for what you're doing that lets you light up the room
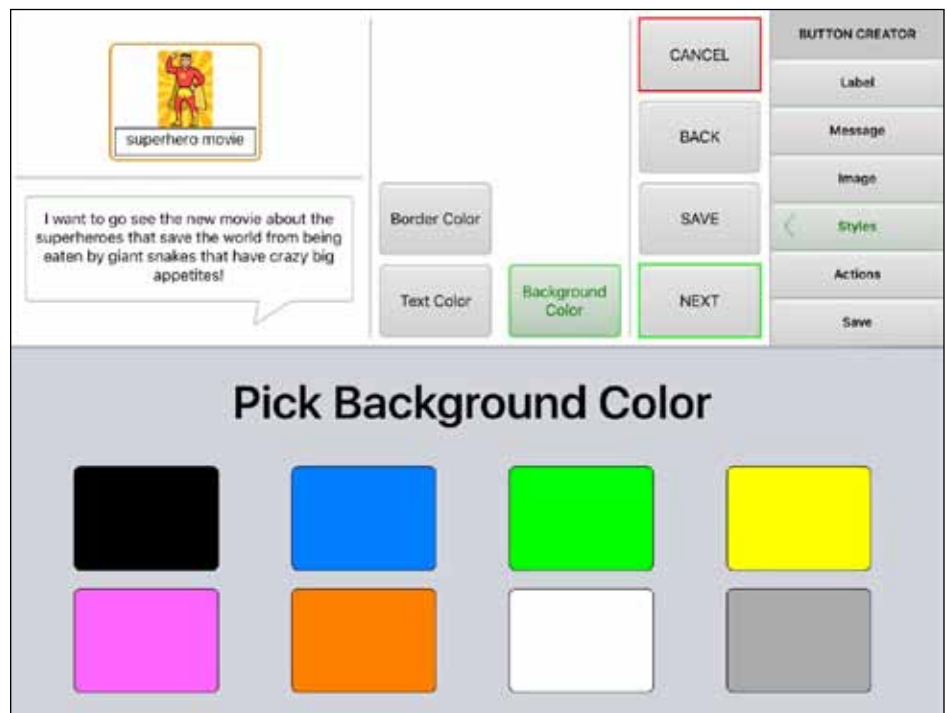
Ease of programming is a necessity for teachers and parents alike. That's why the button wizard takes you through each step of button creation one step at a time and then shows the button changing in real time!

4. **The need to communicate in noisy places. Addressed by Tele-Text, which lets you text instantly to people on their iPhones.**

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5. **The need to also effectively share the interests which build relationships. Addressed by My Stuff, where you can quickly share interests.**

So, now, let's move from the needs of the individual person who needs an SGA to the teachers and people who support them … the final five needs addressed by Total Talk.

6. **Editing needs to be easier!**

I don't know anyone who has not spent long awful hours editing buttons and pages - creating page sets, creating buttons, putting in their own images, etc. You become overwhelmed with choice and an interface is often just too tiny to navigate. Total Talk has addressed this with a gorgeous step-by-step interface that lets you see what you're building, as you build it, and with a user experience that takes ease-of-use to a whole new level. Once you start building a button, you go through steps, one-by-one, so you are aware of where you are as you create a button in real time.

In addition to button editing, we are thrilled to introduce new ways you can edit text you plan for the readout. Many people have found it difficult to scroll and slide your words through a small window creating a longer sentence, so we've addressed this challenge by including a huge area for you to type in a message. For those times when a person wants to create a speech or deliver a class presentation in larger chunks, working in the larger speech bubble feels like getting out of a cocoon and spreading your wings into the air like a butterfly. We hope you love the look of the editing interface, and we think you'll find that using it not only makes editing faster, easier and more efficient – but also more pleasurable and empowering.

7. **A great communication page needs to inform the entire communication experience.**
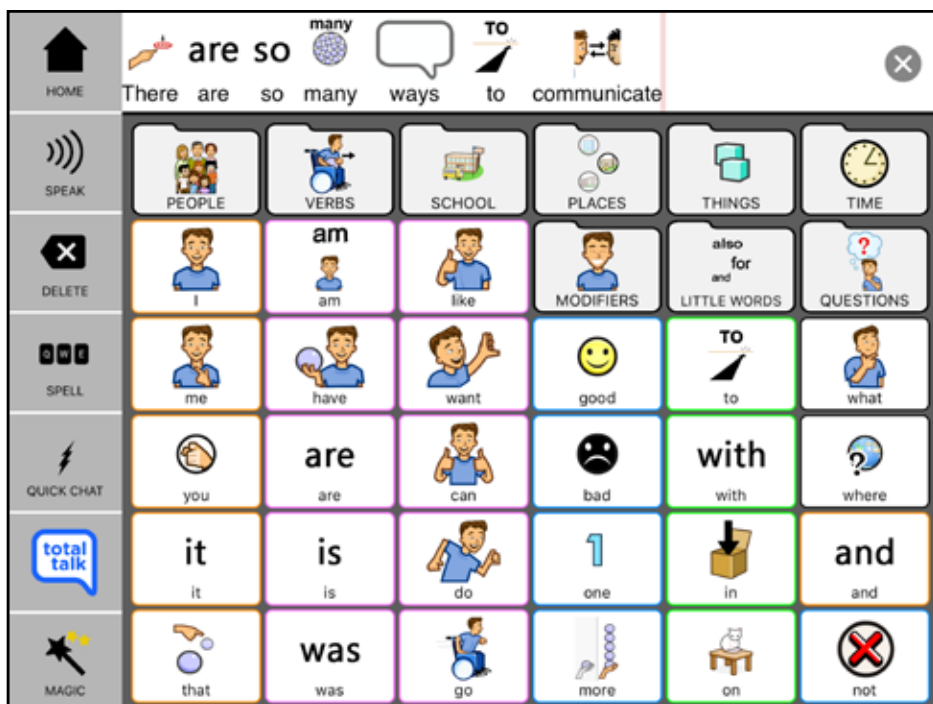
Total Talk was designed so that students can immediately open the app and start using it. Our easily accessible dock and flex folder structure grows with students as they increase their literacy level.
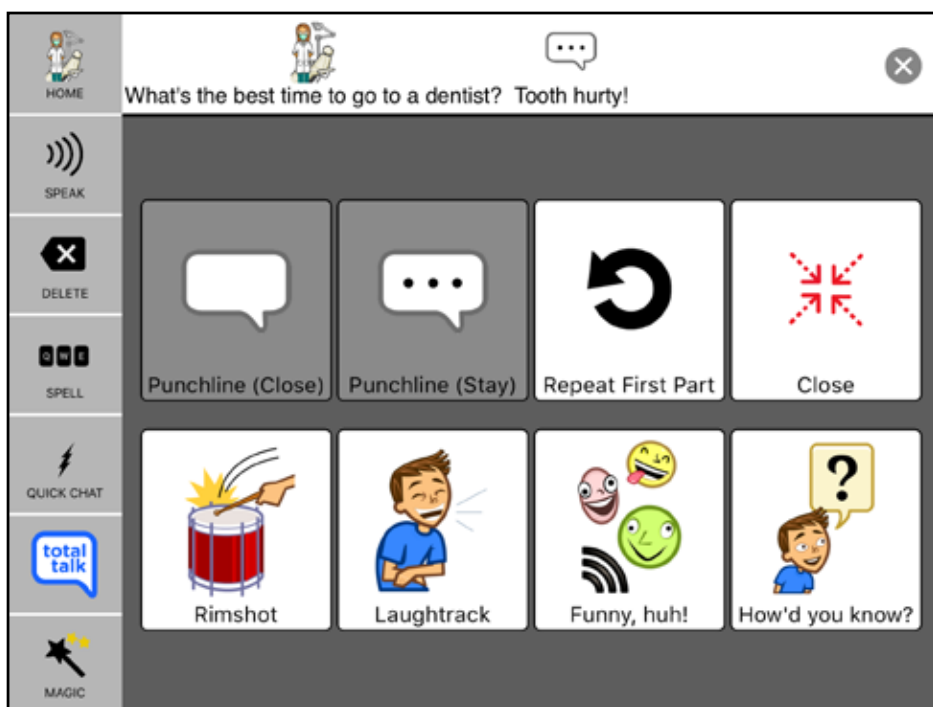
It's important to be funny… and we get that! Joke mode includes a rimshot and laugh track so you can add some flavor to your jokes.

And one of the greatest issues with getting into an SGD or SGA is that the first step is a doozy! It opens up a world that is entirely different from what most people understand. Think of that moment when you first turn it on. A person sees relatively random words. Folders that you only sort of understand. Little icons. Etc. It's not a familiar experience.

So Total Talk provides a navigation bar that is always there to ground you. It reminds you of the different options you always have. Our pages also provide consistent layouts and navigation. And they are filled with approachable and engaging images. Total Talk is designed so that you always have a good sense of where you are, where you're going, and of all the power at your fingertips.

8. Finding strong communication options for different moments needs to be easier.

As a child learns to master language, it's important that he or she also learns to understand the importance of different communication approaches. So we did all we could to help teachers and parents support that.

As mentioned before, hitting the Total Touch button provides instant access to a variety of communication approaches, such as Stories (Social Scripts), Jokes, EZ Phrases (Powerful Phrase-based language), Photo Albums, and other. Imagine how powerful it will feel to be able to share this with a child or student. A single button which opens a world of easy conversation – and lowers the barriers to engagement and sharing one's interests in order to better form relationships.

It is hard to teach the value of diverse communication needs - writing for school, talking to friends, telling stories, exchanging favorites and so on. It's even harder to impress someone with the importance of taking the time for precision when you need it, but focusing on speed when you can.
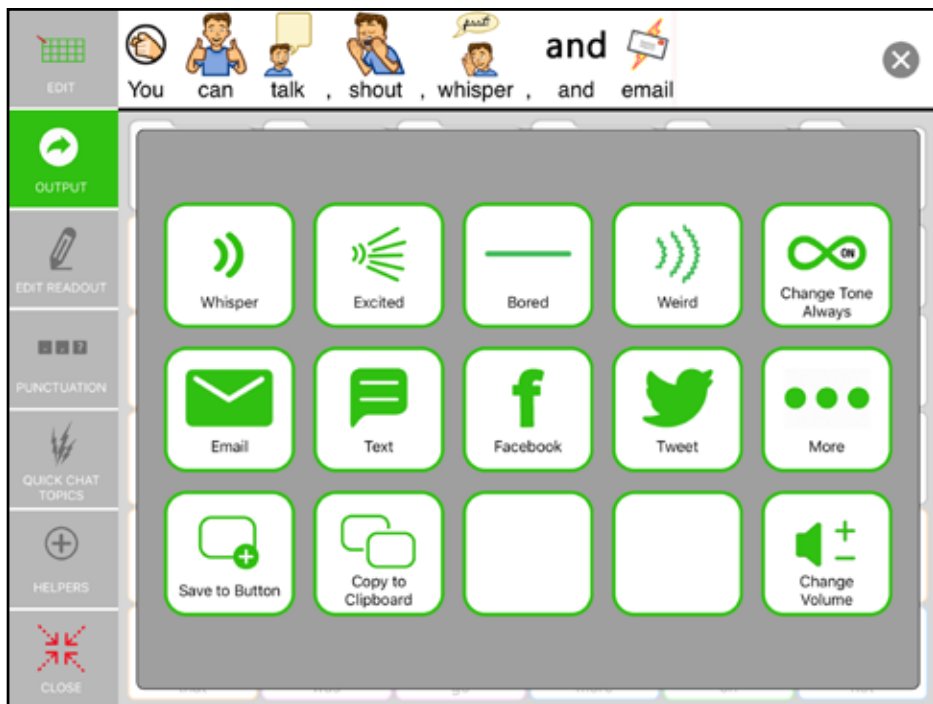
Output features let users showcase their personality by including various ways to express their messages such as, emotive voices and voice morphs that allow you to sound bored or just plain weird!
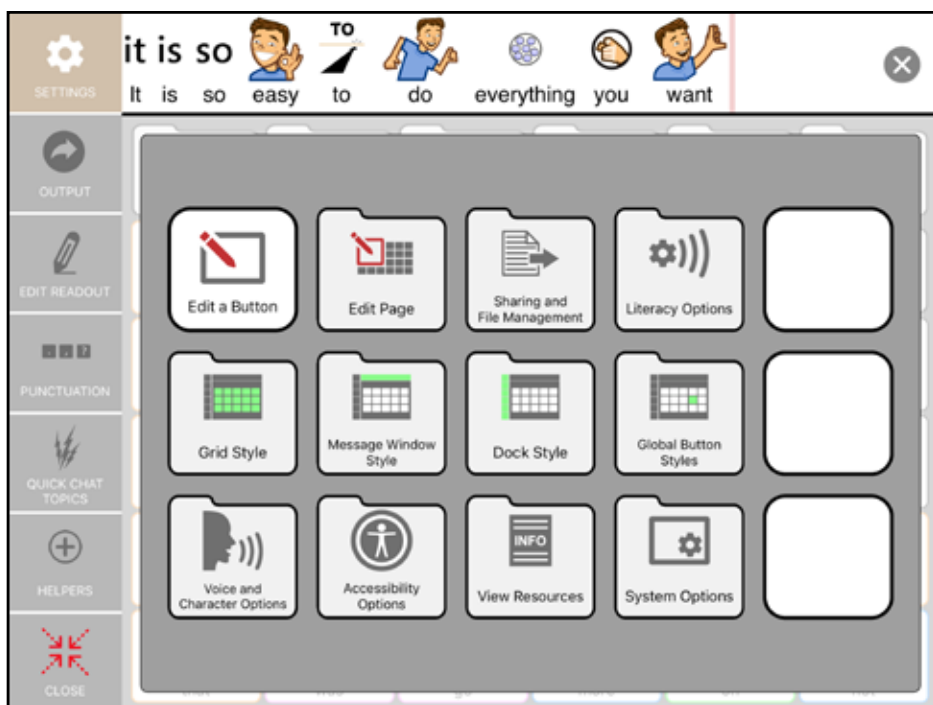
The Settings Menu includes a variety of customizations that are large and easy to use so even the most motorically challenged users can use them.

So we created the Total Talk area – and named the app after it – because that's what we feel can change a world: an ability to teach to different needs – and to have a child adopt them.

Explore the options in Total Talk. And help someone else explore their full potential.

9. Powerful tools are critical for powerful communication.

So we made them especially easy to find and use. It's no secret that the toughest challenge in organizing language is finding the most efficient way to use space. A screen is only so big – and the challenges of determining how to use it are unbelievably complex.

To state the obvious, if you had a screen with 36 folders with 36 words in each, you would be able to get 36 x 36, or 1,296 individual words with two hits! But it would also mean you'd need two hits to get to words you need constantly, such as I, have, to, what, me, etc.

So, we've created a powerful column of tools on the home page, so key buttons will always be available. But we've also added a "Magic button" at the bottom of the dock – and when you press it, it expands upon each one of our functions and provides menus of powerful options. For example, the dock has a delete key, but if you hit the magic button first, you get an entire suite of editing tools. The column has a speak button. But when you first hit the Magic Button, the speak button allows you to change your tone – into a whisper or a show of boredom – and also to output to email, text, Facebook, etc., all from within the app.

One last thing: when you hit the Magic Button before the Home button, you'll go right to settings, where you'll find powerful and useful customization tools. Total talk was built to put power at your fingertips – so you can put it at the fingertips of anyone you're supporting. (You'll note that our settings don't simply use standard the Apple menu interface. Because many people with motor
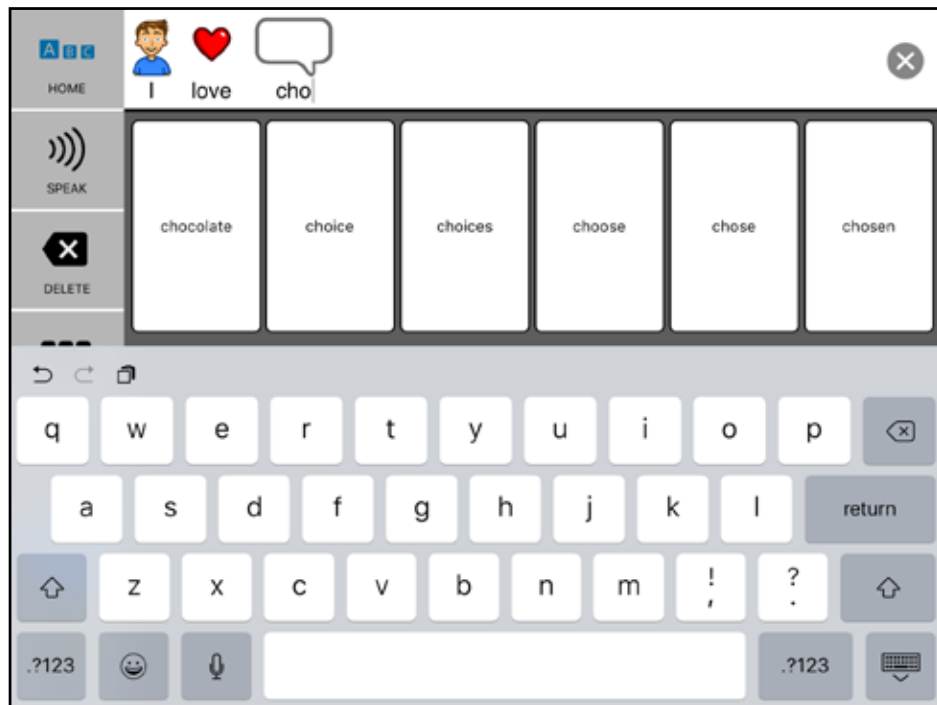
For students that are at a lower literacy level and prefer symbols - simple prediction is a perfect solution that will not overwhelm the student.
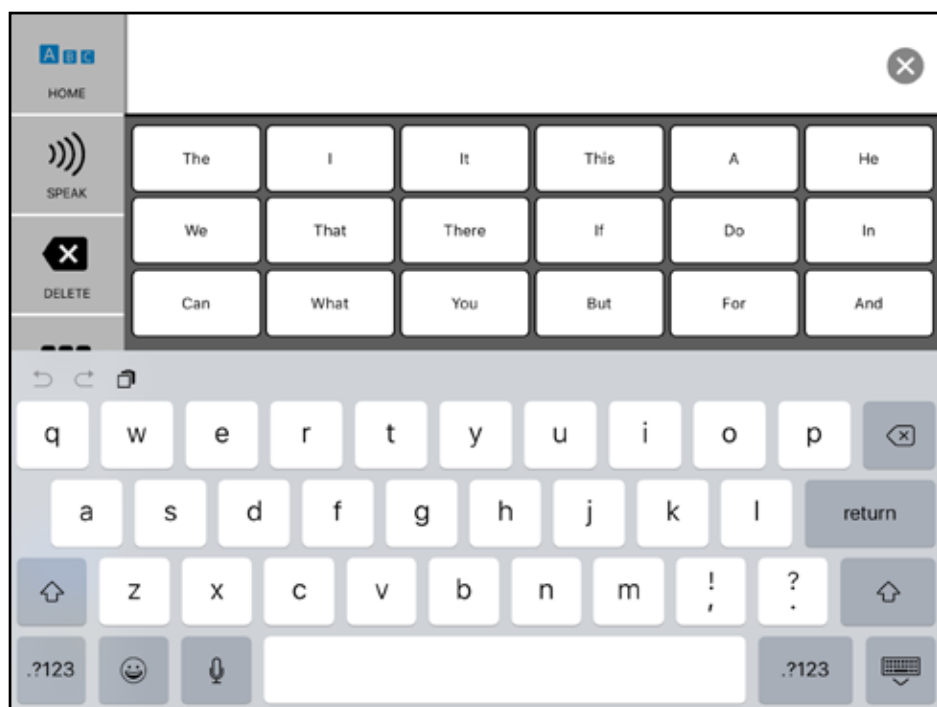
For students that are at a higher literacy level and prefer using the keyboard - three row word prediction gives you everything you could possibly need.

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challenges can't use access those small controls. And that shouldn't happen.)

10. Kids are often more ready for spelling than we think. But they need help.

So we give you a great choice of word prediction options.

We so often start kids out with symbols, and there are many reasons for that. But spelling is, of course, extremely powerful. And with great word prediction, that's even more true. But how many words are appropriate? Should the symbol be there or not? Should they be organized by frequency or alphabetically?

The answer to all that is – yes! As we've seen individuals progress in their mastery of spelling, we've embraced the power that this can bring to the growth of robust language.

So not only is a spelling button easily available on the dock, but the spelling can be used with 6, 12 or 18 word prediction, or none, with or without symbols.

In fact, you'll see that many of Total Talk's features are informed by an understanding that people not only mature in their communication and, therefore, need a system that offers consistent growth, but that people also often want to use different tools concurrently.

11. Okay, I know 11 is cheating, but it's important to add one last thought based on the fact that some things have nothing to do with a device or an app – but rather with our attitudes.

I want to share my belief that it is seismically important to remember that fun is a great thing. It's important to remember that even under the best of circumstances, the kids who are using these devices often have super tough challenges with learning, with inclusion and with being understood. So having fun should be high on our list of things to keep top of mind.

I've learned this lesson as an advocate. I've learned it as someone who's watched teachers and professionals. And I've learned it as a parent. We all dream that our kids, whether child or student, will lead a perfect life. But although many, my son included, will lead a gratifying, engaged, curious and appreciative life, it is not always a life that will be care-free and easy. In fact, many people with disabilities have challenges that even the most informed and empathetic of us will not ever fully understand. (And if I ever think otherwise, all I have to do is ask my son.)

The great educator Adine Usher once told me that to understand a school day for kids who are non-verbal and have physical challenges, imagine that kids without these challenges are taking their classes while hiking up a mountain with a 30-pound pack on their back. And that's just the physical exhaustion. The emotional exhaustion must be pretty challenging, too.

So as we look at supporting kids – in everything from rigorous academic work to light social engagement - let's keep this in mind. We've tried hard to do that – to build joy into Total Talk by surrounding a thoughtful and powerful organization of core language for generative sentence building with beautiful illustrations, compelling graphic design, fun voices and other approaches so a person can be their best in multiple situations. And we've tried to make Total Talk joyful for you, too – by making editing easier, by making the tools you need easily accessible, by having a structure that will remind you of the various ways you can help give an individual more supports and more independence.

And so, in closing, we want to celebrate all of you who do that, too. At some point, a speech device becomes fully integrated into a person's life – more likely than not, as an in addition to head nods, eye gazes and other forms of shared language known only to those closest to the person. A Speech Device or App eventually becomes as instinctive as the voices that come out of the larynx.

But, at first, that's not the case. It's something strange and unfamiliar. Something that needs to be approached, explored, wrestled with. You, readers, are the ones who join on that journey. I so want to say thanks and share my appreciation for you reading these thoughts and for the work we all do. On a journey, there is only one thing better than a great guide, and that is having one who also remembers to make the trip informative – and enjoyable!

FOR MORE INFORMATION

To learn more about Total Talk, visit Total-TalkAAC.com; Download Total Talk here Download our fun & informative primer here; Email info@TotalTalkAAC.com. Please feel to reach out to me personally at richard.ellenson@Total-TalkAAC.com ∎

Note Taking Software: Could it be the Key to Aiding Transition?

A closer look at Sonocent Audio Notetaker

According to data from the National Student Clearinghouse Research Center, 46.1% of students who enrolled in the fall of 2009 did not complete their college program, a decline of 2.1 percentage points from that of the previous year.

In other words, nearly half of all students who start a degree do not manage to complete it - and that figure is rising.

While the reasons for this are complex, at Sonocent we're seeking to reverse the trend by successfully solving an overlooked problem in an innovative way.

AN UNEXPECTED RESULT

Back in the Fall of 2015, the Disability Office at University of Nevada, Reno, were looking to modernize the way they offered note taking support on campus.

They knew that the existing approach of arranging for students within each

Image 1: A student using Sonocent software in lectures to take notes more easily.

class to share their notes could be improved. It was ineffective, time consuming to organize, and created dependence rather than independence.

DAVE TUCKER, the President of Sonocent LLC, is someone who strongly believes that effectively utilizing spoken information is the key to helping many students reach their full academic potential. Graduating with a degree in Japanese, he went on to join his father in growing Sonocent into the award-winning company it is today. Over the years, he has delivered talks on note taking at conferences including ATIA, AHEAD and CSUN.

Image 2 - An illustration to show how Sonocent software visualizes audio recording as editable chunks.

The approach meant that students did not take notes themselves and in many cases were failing to get notes at all.

Although this is common practice among colleges, Darrin McCarthy, the university's Lead Assistive Technology Specialist at the time, was eager to find out whether technology could offer any improvements over the established approach to note-taking accommodations.

Darrin decided to run an initial trial of the award-winning study software Sonocent Audio Notetaker with 20 students. He was expecting students to prefer taking notes themselves using technology, but the outcomes from using the software far surpassed anything he was expecting. (Image 1.)

Over a single semester, eighty percent of the students allocated the software improved their GPA. The average improvement in GPA was two grade levels and one student even improved by six grade levels.

Was using Sonocent for note-taking support the reason for such a dramatic leap in grades? Darrin is convinced it was.

NOTE TAKING: THE FORGOTTEN STUDY SKILL

It is fair to say, most students still arrive at college not knowing how to take notes properly. This is not through lack of ability; they have just not been taught effective note-taking strategies. In an education system where most instruction is imparted orally this is a major handicap.
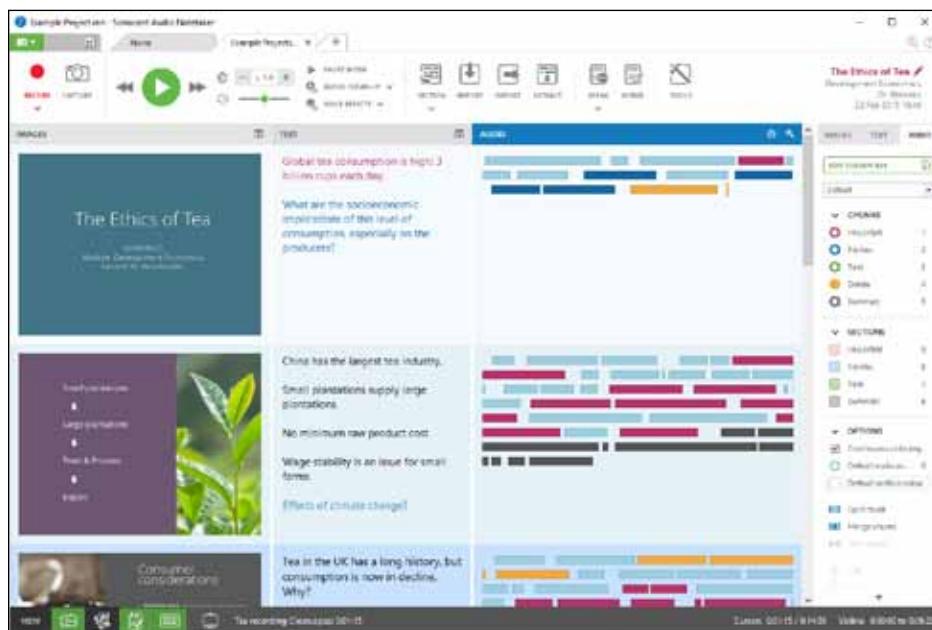
Image 3: From left to right; Image / Slide Pane, Text Pane and the Audio Pane.

Moreover, the research is unequivocal: students who take better notes get better grades.

Your notes not only function as a way of capturing the oral content of a class for later review, but the very process of taking notes itself has been proven to be crucial within the learning process. By engaging with information and creating summaries, you are synthesizing the content, which improves understanding and memory retention.

THE LINK BETWEEN NOTE TAKING AND RETENTION

Many people underestimate the extent to which struggling with note taking impacts students with disabilities.

In a recent 2016 British study of students with dyslexia at college, when asked what problems do you encounter, 95% of respondents said they have problems with note taking: more than any other academic requirement.

According to the National Council on Disabilities, over half of students with disabilities are identified as at risk of failure and/or dropping out of college. Furthermore, only 34% of 4-year college students with disabilities graduate from their program.

Combine that with the fact that 65% of students who receive disability support at high school do not self-identify and therefore do not receive support from the college disability office and one can

start to imagine part of the cause of the nation's distressing retention rates.

In short, it is crucial that we take note taking as a serious academic problem, especially among at-risk students.

THE SONOCENT APPROACH

Sometimes we become so accustomed to the standard method of performing a task that we do not question whether there might be a better way. The process of taking notes - that is, writing down summaries of spoken information - has hardly changed in centuries. Listen and write down what you hear.

It sounds so simple, but in reality it is frustratingly difficult. Not only do you need to understand complex academic information, but you also need to process and summarize parts you think are important or parts that you do not understand as you listen. It is multi-tasking at its most extreme.

The innovation behind the Sonocent approach to note taking is that it seeks to address the fundamental issue with note taking: trying to do too much at once. Sonocent Audio Notetaker is the first tool to enable students to scaffold the note taking process - that is, to break it up into manageable stages - so that students of almost any ability can do it.

The first stage is to capture a recording of the class. (image.1)

AUDIO VISUALIZATION

Recording classes and revisiting those recordings for note taking is not a new concept. Digital voice recorders have been around for a long time.

However, Sonocent has created a unique visual interface for audio recordings that enables users to work with spoken language as they would written language, without turning it into text. This is the key innovation that makes our note taking approach possible.

First, punctuation. Sonocent has developed a clever algorithm, optimized for distance recordings, which breaks
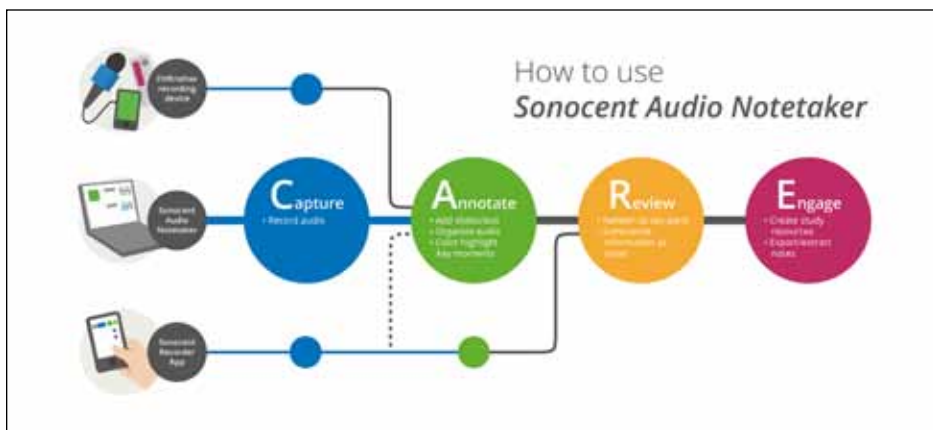

Image 4: Our CARE process breaks note-taking down into manageable steps.

up audio recordings phrase-by-phrase. Sonocent software displays each pause or breath as a gap in between 'chunks' of speech. These gaps act as commas and periods within the recording. (image.2)

Chunks are displayed on lines, much like text, and users can create "sections" which are the equivalent of paragraphs. The chunks can be deleted and edited much like text can in a word processor.

The audio "chunks" can also be highlighted with various colors, either while a recording is being made or after. More on this later.

The software displays different types of media in designated columns: audio, text, images, and presentation slides. (image.3)

When students take notes from a textbook, they often go through with a colored pen highlighting parts they do not understand or think are important. They then return to those highlights and take the time to review them, conducting further research or summarizing key points as notes.

This is exactly what Sonocent enables students to do when they take notes in class.

CASE STUDY #1: NOTE TAKING

Ebony is a senior at high school who has ADHD and autism. She attends El Camino Community College in the evenings, one of more than 50 Community Colleges in California now using

Sonocent to support their students with note taking.

Ebony has difficulty concentrating in class. Taking detailed notes by hand simply would not work for her.

"With Sonocent I can pick up all the information I need. I can use it on my phone and my laptop. As I'm recording I can take photos and add notes and highlight things; it is very interactive. There's so much going on in class and there's a lot to take in, but with the software I can focus on one thing. It's effortless because everything I need is there in front of me."

Ebony makes use of the free Sonocent Recorder app for iOS and Android. It enables her to annotate recordings during class before transferring her projects to Sonocent Audio Notetaker for review.

Sonocent goes to great lengths to teach students how to create effective notes. After all, so many students do not know how. (image.4)

WE EXPLAIN THE PROCESS THROUGH THE ACRONYM 'CARE':

Capture the information from your class by recording it.

Annotate your recording with color highlights, photos, presentations slides and text.

Review your annotations and summarize the key bits in the form of notes.

Engage with your notes before an exam or when writing an essay.

Ebony follows the same process to create her notes. First, she records her classes with the Sonocent Recorder mobile app. She annotates with color the things she finds important or the things she needs to come back to as she listens. Annotating helps her stay engaged and helps her focus on what the professor is saying. (image.5)

After class, she reviews her recordings. She listens back to the parts that she colored and takes her notes right alongside the audio. If the class included presentation slides she will download them and import them into her project, aligning each slide to the relevant part of the recording. If not, she takes photographs using the app, which aligns the recording in a similar way.

Periodically she will review her notes. This becomes especially important in the run-up to an exam, or before she completes an assignment.

Ebony's mother, Cherylann, has seen the difference Sonocent has made for Ebony close hand:

"She has always been brilliant so I knew the intellect was there. My daughter struggled for years with note taking and she was easily distracted. My daughter now has the tools that she never had before.

"[Since using Sonocent] I have seen a difference in Ebony. She is becoming more focused and is doing a lot more work. She is more confident, more open. Willing to go beyond the norm. It's like a boost. She now likes learning. It brings tears to my eyes to see her so confident."

HARNESSING THE POWER OF SPOKEN LANGUAGE

Sonocent's innovation of visualizing spoken language was initially designed to aid the process of note taking. However, over the course of the last few years, it has become clear that its power extends further than simply taking notes.

In 2012, with the help of study skills experts and assistive technology trainers, Sonocent developed a series of 'audio-centric' study strategies aimed at utilizing audio recordings for other study skills beyond note taking.

The ease with which students can work with spoken language in Sonocent means that it can provide an opportunity for working and studying without relying on text.

CASE STUDY #2: COMPOSITION

Yishai Barth is an exceptional student who has overcome exceptional challenges. A freshman at Hebrew College in Massachusetts, he is dyslexic, dysgraphic and has a physical disability which affects his fine-motor skills. He has been using Sonocent Audio Notetaker since he was at high school, and describes it as the "hub of my learning".

For Yishai, text is a barrier to learning. But with Sonocent software, he can come at his studies from another angle. As he explains:

"Some learners are auditory learners, and when they need to express ideas, they need to actually speak what they need to say.

"Throughout my secondary-school education, I struggled to find a way to gain independence and autonomy in my learning, and particularly the part of learning which have to do with self-expression and the expression of ideas.

Yishai uses Sonocent as the starting point for most of his study activities.

"I use it for taking notes and I also use it for in-depth analysis of audio books. But I mainly use it for writing essays and compiling research for those essays, and for brainstorming. I went from not being able to execute the simplest of assignments to taking a subject matter that I was really interested in and writing a great paper on it, in the exact same amount of time that it would have taken anybody else."

CONCLUSION

In an age when we are becoming ever more dependent on technology to auto-
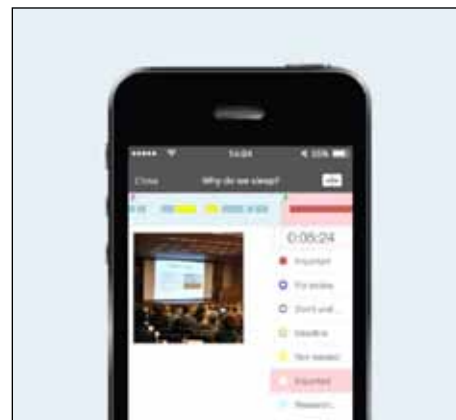
Image 5 - The free Sonocent Recorder companion app can be used to record and annotate on the go

mate aspects of our lives, we must refrain from the temptation to use technology in this way for learning.

For Yishai, Sonocent has liberated him from having to work with text. As he says: "It is the first program I open up in the morning and the last I close. When I think of accomplishing any particular task, it's the first and last part of my workflow."

For Ebony, it has completely changed her attitude to studying and has prepared her for the transition to college.

Sonocent is software which addresses a very real problem in an understated way, by supporting students with developing the skills they need to succeed academically. And it really works.

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Prices for single licenses start at $85 ∎

Dolphin's New Release of SuperNova Changes the Landscape for Students In and Out of the Classroom

While SuperNova has been around since 1998 and has always been a solid and technically reliable solution for people who are visually impaired, here in the United States, it has never really achieved the "galactic explosion of light" status that its name implies. That said, this latest release is a game-changer, both here and abroad.

All of the changes to SuperNova have been driven by Dolphin's desire to provide users the ability to participate and collaborate in the most organic and authentic ways. These innovations not only impact students' natural workflows, but also enable teachers to deliver instruction with very little adaptation.

The first thing you should know is that SuperNova is now available in three configurations: Magnification only, Magnification and Speech and as a Full Screen-Reader. Dolphin believes students should be provided with the right balance of technology to achieve the tasks they need to accomplish. Each version of SuperNova builds on the version before and adds a little more support with each step up. In addition to creating several levels of support, Dolphin provides students a home license for the same version of Super-Nova that the school purchases for them — free. This provides students the

opportunity to be fluid between school and home.

For students with low vision and the teachers who teach them, Connect & View is a truly revolutionary way to include students in interactive whiteboard instruction. Connect & View displays a mirror image of any brand interactive whiteboard (SMART, Promethean, Mimio, etc.) to a student's Windows computer, laptop or touch-screen tablet. Students can customize their version of the whiteboard image by increasing magnification, changing background and font colors, zooming in on specific areas of the screen and doing screen captures for studying or revis-

MARY JO BARRY is a marketing consultant and a 20-year assistive technology professional. Currently, Mary Jo heads up Dolphin Computer Access' marketing in the United States. Mary Jo has a Bachelor's in Education and has spent the majority of her career after teaching working as part of product development and marketing teams for companies producing products for people with varying disabilities. Ms. Barry is an author of curriculum, international speaker and trainer. Mary Jo works out of her home office near Phoenix, Arizona and enjoys everything the Valley of the Sun has to offer.

iting later. Students use the split screen function to simultaneously take notes or view other material. Students can be cued when the teacher adds or makes changes to the board — their magnified view will "jump" to the place on the board where the changes are being made so that they're always participating in real time. The best part about Connect & View is that a teacher does not need to have SuperNova installed on their computer. SuperNova connects to whiteboard technology through a free piece of software called VNC. Beyond installing VNC, set-up is as easy as identifying the device you want to view. In addition to whiteboards, students can use Connect & View with a document camera or toggle between the two. Students can interact with projected print material in the same way they interact with a whiteboard.

Another addition to SuperNova for students with low vision is Intuitive Touch. Intuitive Touch is functionality that allows students using a touchscreen environment to navigate naturally and instinctively. It behaves just as you would expect it to; students simply spread their fingers apart to increase the magnification or draw their fingers together to decrease — font crispness and clarity is never lost. A finger drag across the screen repositions anything being viewed, or slides to the next page.

For both students with low vision and those who are blind, SuperNova separates itself from other magnifier-speech products by providing Bookshelf and built-in scanning and OCR capabilities in each of the three versions of Super-Nova. Bookshelf is available from the SuperNova control panel and provides students direct access to accessible print repositories, like Bookshare, NLS/BARD, NFB-Newsline, Project Gutenberg and ePubbooks.com. Again, students can always go to their browser to access the repositories in which they have membership, but Bookshelf makes it easier, makes it one click away and part of their work flow. When students encounter
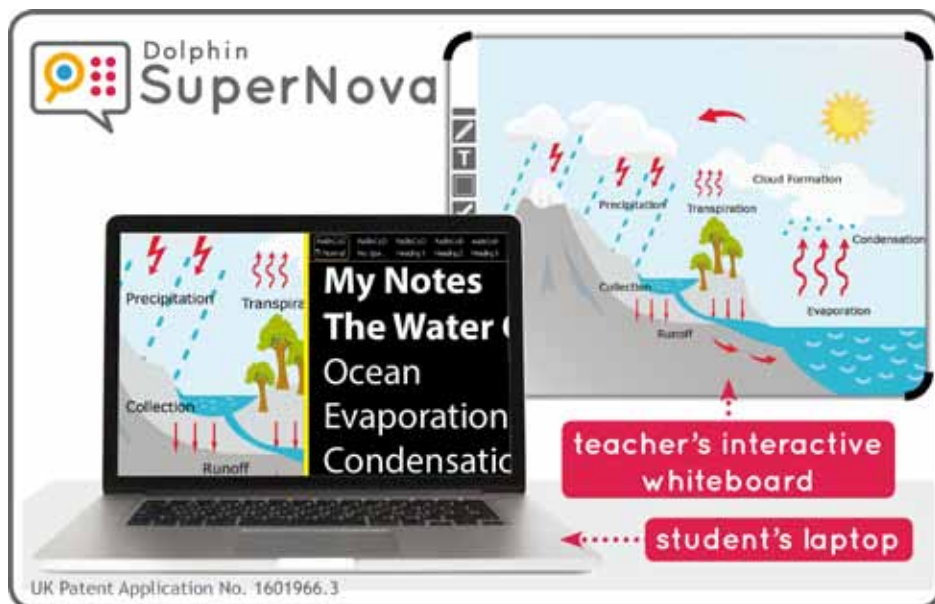

Image of a student's computer screen mirroring and customizing the image being projected on the classroom's interactive whiteboard

Image of a hand interacting with a touchscreen tablet.

inaccessible text, no problem, SuperNova provides a solution for that too. Built-in scanning and OCR is SuperNova's simple process for giving users the ability to capture and convert print and digital text on the fly. Using a document camera or screen capture, student can convert any inaccessible text in the moment, right when they need it.

Item Finder is a function that can only be found in the Magnifier Reader and Full Screen Reader version of Super-

Nova. Item Finder is a utility that works wonderfully on websites, in Word documents and in Excel. It consolidates different elements into one box so that students can quickly and easily get a feel for the entire page and page elements in context. Students can then choose by which element(s) they would like to navigate.

Lastly, SuperNova is an international product and, thus, is available in multiple languages. A cool perk for students who

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The SuperNova Connect & View Toolbar that showcases the following buttons: Close toolbar, increase magnification, decrease magnification, rotate image, set color preferences, lock view, capture image and hide toolbar.

are taking language courses is that they can switch voices automatically when using Arabic, Hebrew, Russian, Chinese or Greek to accommodate the reading of those languages. A great perk for teachers is that SuperNova can handle converting and reading inaccessible worksheets, quizzes and tests that may be in other languages!

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*Note - While this article obviously addresses educational settings and students, you might like to know that Dolphin is poised to release an Enterprise Edition of SuperNova this fall. This version will be aimed at adults who require accommodations in the workplace.

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Strategies for Teaching Core Vocabulary Throughout the School Day

What do we say when we speak? Do you ever think about which words you use the most? How can taking into account frequency of use help us to teach meaningful communication?

Research shows that 80% of what we say is communicated with only the 200 most basic words in our language. (Baker & Hill, 2000) These word types are known as core vocabulary. They are the words we use across contexts throughout the day. Examples of these types of words include: want, need, see, have, use, no, off, done, listen and come. They are comprised of word types that include pronouns, prepositions, helping verbs, action verbs, demonstratives (ex. this, that), and adjectives (such as feelings, colors, size, etc.). These words ensure that a person can communicate in any portion of their day, not just during a specific activity.

A perfect example that uses core vocabulary comes from Dr. Seuss's Green Eggs and Ham. The entire 62-page book is composed of 50 words, 38 of which are core vocabulary words. "Do you like green eggs and ham? I do not like them, Sam-I-am. I do not like green eggs and ham. Would you like them here or there? I would not like them here or there. I would not like them anywhere." As you can see, the list of fringe vocabulary is much shorter than the list of core vocabulary (words are italicized) in this example.

Now you have a general definition of basic core vocabulary. So, what is fringe vocabulary? Fringe vocabulary is composed of words that are specific to a topic, environment or individual. They are not generic and will likely NOT be used across all environments. They are primarily nouns. For example, as summer is upon us, some specific fringe words may be: shovel, pail, suntan lotion, floats, etc. In the coming winter, these words will likely be part of our dreams rather than daily discussions (unless you are fortunate enough to live by a warm beach all year long). Fringe words can

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become core words when they are used in a person's vocabulary regularly and in various contexts. For us (the authors), these words would include coffee, chocolate, Doritos and, perhaps, wine. As these words move from fringe vocabulary to core vocabulary, they are more specifically classified as personal core vocabulary. Identifying personal core vocabulary is important to making communication systems salient and motivating to the individual.

How does this apply to Augmentative and Alternative Communication (AAC) Systems? Who does it apply to and when can it be used? Though there are various types of systems ranging from paper-based, low-tech single or multi-level, or high-tech static or dynamic display, core vocabulary can be taught on all of them. And, the only prerequisite to receiving access to augmentative communication is breathing. (Miranda, 1993).

Most importantly, a communication system should be available at all times!!! A core-based communication system, made available throughout the day, means that the individual user has access to communicating about anything they want, anywhere they want. Communication happens everywhere.

That being said, should instruction in the use of core vocabulary for communication be limited to the speech room, twice a week, for 30 minutes? We don't expect babies to learn to talk, only receiving input for one hour a week. We shouldn't expect AAC users to become functional communicators with such limited practice. We are not at all implying that speech therapy time needs to be increased, but rather to understand that this input should be provided by the classroom teacher, parents and other therapists throughout the child's day.

MODELING LANGUAGE

The typically developing child will have been exposed to oral language for approximately 4,380 waking hours by

Example of homemade word box.

Using a talking photo album for a word of the week book can be engaging!

the time he begins speaking at about 18 months of age.

"If someone is using a different symbol set and only has exposure to it two times a week, for 20 -30 minutes each, it will take the alternate symbol user 84 years to have the same experience with his symbols that the typically developing child has with the spoken word in 18 months." ~ Jane Korsten

Clearly, we must provide access to hearing and using core language across the day for individuals using AAC. So, what are the techniques that can be used to provide this input? The following section will provide you with a list and explanation of example techniques for teaching core language. Note: Speech and language pathologists can play a vital role in training members of the entire team, including teachers, instructional assistants, PTs, OTs and, when appropriate, peers to implement these techniques.

Repetition with Variety Use many activities that target the same core vocabulary in similar ways, but in different contexts or with slightly different language.

Active Participation Have students actively and physically engaged in the core word strategies and activities; let them do the gluing, cutting, typing and recording. Choose activities that will be highly motivating to the learners. Remember, make vocabulary learning fun!

Aided Language Stimulation (ALgS) ALgS is a therapeutic technique in which the communication partner points out symbols on the communication display as she interacts verbally with the user. The communication partner teaches the child receptively before expecting the child to use language expressively on their speech generating device (SGD). Modeling the use of communication helps the child to establish an understanding of how their vocabulary is organized and can be combined and used generatively to communicate during motivating activities.

SO HOW DO WE DO THIS?

• The communication partner, not just the student, needs to use the device. Make it a conversation!
• Use parallel talk. Use words and short phrases to discuss what the child is hearing, seeing, doing and feeling.
• Provide language input at a slow rate.

• Talk about what you are doing while you are doing it.
• Expand on what the student communicates. If she says "bubble", model back, "Oh, that's a big bubble."
• Provide several repetitions when commenting on ongoing events.
• Words of the Week Choose core vocabulary words that become a focal point for the week's instruction and modeling. Find opportunities throughout the week to highlight these words in the context of daily activities. Remember to use principles of active participation!
• Word of the Week Box – For the class, or each student, put written words, photos or remnants (i.e., a cotton ball for "soft") in the box. At the end of the week, or whenever the opportunity presents itself, open your box and explore. {Insert Photo of word box}
• Word Wall – Have students add pictures, objects, text, etc. that relate semantically to the target words. This wall will grow throughout the school year.
• Word of the Week Books – These can be tangible books, Powerpoint book, folders with pockets, talking photo albums, etc…that depict the current

Outline of a heart filled with all the things you love.

Example of how to present a language magnet.
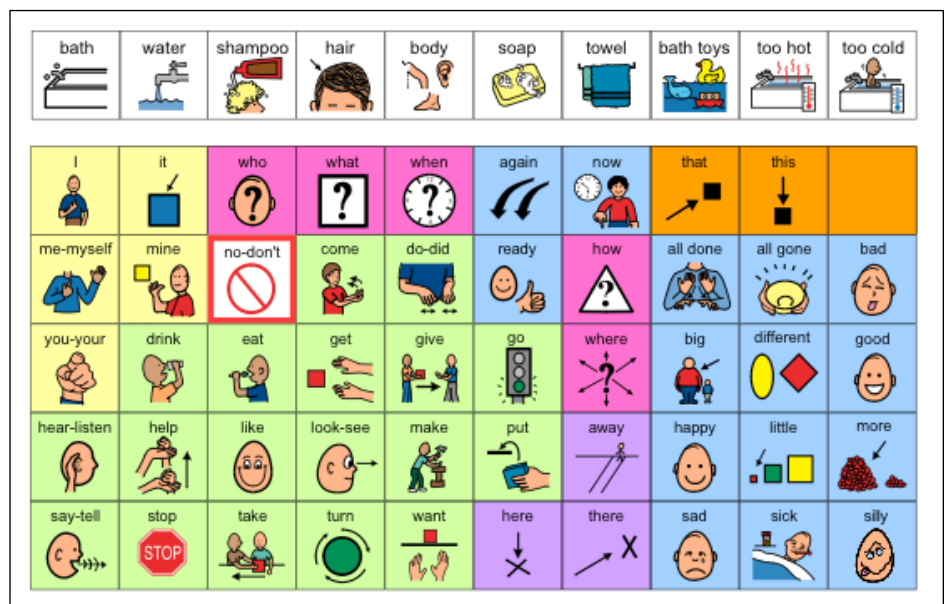
Example of a Core Language Board with bathroom fringe words above.

words of the week. {Insert Photo of word week books}

- Word Art – People of all ages enjoy art (though sensory issues can impede this love)! Embed words in images that relate to the word, For example, use shapes or write words in bubble letters and collage items that relate to those words. Another example is to focus on the word "love" and make a collage of things the student loves within a large heart.

- Word Parties – Have end-of-the-week or end-of-the-month word parties. Use party materials, games and food that motivate the learners. Use these materials to highlight the targeted words. (ie. When targeting the words "go" and "stop", play an adapted version of the game Red Light, Green Light).

- Scavenger/Treasure Hunts – Go searching for items that relate to the targeted core vocabulary or hide written words or photos that depict the words and go searching. Make it fun! Tell students you are going on a hunt, give clues, make teams, create treasure maps. This can be a great activity to include peers.

- Language Magnets – "Kids ask lots of questions, particularly in the early years. Annoying? Sometimes. Valuable? Always! From a language learner perspective, those pesky questions serve a very useful purpose: they invite (or demand) a linguistic response. They are magnets that attract language. And that's just what a language learner needs…lots of language input." (Carole Zangari, Praactical AAC). Examples of language magnets include, "What are you doing?", "Where are you going?", "What is that?" or "Can you explain it another way?" Giving access to asking questions is giving a student access to social and academic interactions. {Insert Photo of lang magnets}

Core Boards in specific areas Low-tech core vocabulary boards can be placed near classroom "centers". Reading, writing, cooking and science centers provide lots of opportunities to practice core words in different contexts. You can add subject-specific fringe or core words to each particular center. For example, science is a great place to use hot, cold, big, little, up and down! Use cold instead of iceberg and you've just practiced a word that can be used in many different contexts. {Insert Photo of core board}

Books, books, books!! What can we say about books?! Kids love books (Active Participation), and they provide lots of opportunities for Repetition with Variety (think Brown Bear). Provide a weekly Book Basket with books that target the Word of the Week. Add pictures from these books to your Word Wall. Provide access to literacy and assume competence from the very start!

Wind-up Toys Talk about a fun activity that everyone of every age loves!! There are so many core words that can be focused on while playing with wind-up toys: go, stop, more, again, all done, fast, slow, turn. Let your imagination run away with you during this fun activity. {insert photo of wind up toys}

Use Pointers Go around the room and school pointing out the core words you are learning. Use the pointers to highlight words in books and on your word wall. Use store-bought pointers or make your own out of popsicle sticks and googly eyes (or anything else that can make a pointer encouraging). This allows students to be active participants while learning language. {insert photo of pointers}

By using the above techniques, the entire team can play a role in ensuring that language is practiced, made accessible and valued across the school day and at home. And of course, there are plenty of other techniques to use as well. Should you practice here, or there? You should practice everywhere!

REFERENCES AND RESOURCES:

http://praacticalaac.org - find many of the above mentioned activities as well as suggestions for many topics related to AAC.

Wind-Up Toys – Fun for Everyone!

Using pointers to identify vocabulary around the room or school can be exciting!

http://www.vantatenhove.com - find core vocabulary lists and other useful resources

http://www.mytobiidynavox.com/Account/Login?ReturnUrl=%2FSAML%2FSSOService - make your own free account and get free core word lesson plans and printable books

www.pinterest.com/pin/88946161362972475 - Kate Ahern - Core vocabulary learning books

https://aaclanguagelab.com/blog/core-vocabulary-and-shared-book-reading - review this blog referencing using books to teach core vocabulary

chrome-extension://mloajfnmjck-fjbeeofcdaecbelnblden/http://minspeak.com/students/documents/2000CSUN.pdf -a presentation given at CSUN in 2000 about the importance of core vocabulary ■

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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

Becoming Brad

We were inspired to present at Closing the Gap 2015 in order to tell the story of an amazing individual that we have had the privilege of working with as a team. We wanted to share his journey through rehab, elementary and high school, and through technology, and we wanted him to help share the journey, too. Here is our story …

Brad Heaven began attending the MAB-Mackay Rehabilitation Centre (MMRC) in Montreal, Quebec, Canada at the age of 18 months. The MMRC is an establishment in Montreal serving clients with motor, speech and language, visual and/or hearing impairments. Most programs serve a pediatric population for children ages 0-18, or 21 if attending a specialized school. Within the same walls lies the

Mackay Centre School, a social affairs school whose mandate is to provide educational services to students with physical disabilities, communication and language disorders and students who are deaf or hard of hearing. The school offers many programs to benefit students: small class sizes, smart boards in every class, a computer lab and a physical education and swim program adapted to the needs of the students. The Augmentative Communication or Aug Com Class is a specialized classroom at the Mackay Centre School. Established in September 1998, the primary focus of the classroom is communication and serves students with complex communication needs. The students in the Aug Com class use alternative

Taylor Swift concert
July 2015 Montreal

or augmentative forms of communication, i.e. picture symbols, low-tech displays, switches and voice output devices. The Aug Com class runs for the morning only as it has an intensive focus on communication. In the

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TRISH COFFIN is a Speech-Language Pathologist who has specialized in AAC for most of her 14-year career. She works with pediatric AAC clients at the MAB-Mackay Rehabilitation Centre and teaches Introduction to AAC to Masters S-LP students at McGill University in Montreal, QC, Canada. Patricia.coffin.mackay@ssss.gouv.qc.ca

LESLIE LEVINSON started as a beneficiary attendant at the Mackay Center School. For the last 27 years she has been a teacher at the school and helped to create the Augmentative and Alternative Communication class in 1998, which she still runs in the morning. She supports AAC students in other classes in the afternoon. llevinson@emsb.qc.ca

MARC MOREAU is a technology assistant who has worked at the MAB-Mackay Rehabilitation Centre for 30 years. For the first 20 years, he worked as a beneficiary attendant, looking after the physical needs of the clients, and for the last 10 years has supported AAC clients in learning to use communication devices and switches, as well as providing training in powered mobility. Mmoreau.mackay@ssss.gouv.qc.ca

BRAD HEAVEN is 19 years old and has athetoid cerebral palsy. He is the youngest of five kids in his very supportive family and just completed his first year at CEGEP, similar to junior college. He is currently driving a power wheelchair with an ASL head array, which he also uses for two-switch step scanning on his Dynavox Vmax+ with Scanning Wordpower, his Macbook and his iPad Pro with Touch Chat HD. He loves hockey, spending time with his family and hanging out with his friends. bradleyheaven96@live.ca

afternoon, the students are integrated into age-appropriate classes within the specialized setting of the Mackay Centre School in order to promote socialization with their peers.

Before Brad started school, he received rehab services (PT, OT, SLP and seating) as an outpatient. In those early years, he participated in a communication and play group in which parents were key participants in discovering how to adapt play and communication with a child with a physical and communication impairment. Brad began developing the ability to communicate yes and no, which he was able to do by nodding and shaking his head, and was introduced to Picture Communication Symbols on an 8-location Macaw voice output device. He was able to access the Macaw using his fist. He was given a customized positioning insert and adapted stroller, allowing him to be well seated and supported. Brad was also introduced to music therapy and was exposed to adapted musical instruments. Recalling these early years Brad says, "I vaguely remember driving the Cooper Car and doing activvities with my therapist and my mom. My mom remembers seeing a kid pedaling a bike with their hands, which made her see the possibilities for me."

When Brad first started in the Aug Com Class, he used a low-tech communication book that he accessed with his fist. While Brad was very efficient, we quickly realized his communication needs were not being met.

To further his communication and educational abilities, we used various communication devices that Brad accessed using his head and two-switch step- scanning. When we would sing, Brad would add the dependent lines to songs using his switches and a Cheap Talk. We used

Leslie, Brad and Marc in the Aug Com class 2001.

the Ablenet PowerLink for cooking (making smoothies) or other fun activities, such as using a drill to fix things or shredding paper using an industrial paper shredder.

On the computer, Brad loved using Intellikeys displays to access Bailey's Bookhouse for creating stories, rhyming words and alphabet activities.

Another important computer program was the original Kidpix program, which Brad accessed with his head switches and the Discover switch interface. He was able to scan the tool bar menu. This allowed us to create many math computer activities to work on number skills and counting.

We created low-tech displays for all our reading books for various voice output devices that allowed us to model language while reading, allowed Brad to answer questions about books he had just read and allowed his family to read with him.

It was in the Aug Com class that Brad received his first communication device (the Dynavox 3100) and the focus of our work with Brad was

helping him learn how to navigate Scanning Picture Word Power.

Once Brad was proficient using the 3100 as a means of communication, it was time for him to leave the specialized setting of the Aug Com class and transition full time into a Mackay Centre School classroom.

BRAD: "Starting school was hard for me because I used to miss my mom and she used to miss me too. I remember my first day of school, everyone on my street came out to see me get on the bus. I had trouble adapting to new people feeding me. I liked Leslie's class because we went on many field trips and her and Marc used to teach me how I could benefit from using my Dynavox. I was overwhelmed when I started using my Dynavox but I eventually got better using it with their help."

Once Brad left the Aug Com class, Leslie's role in helping Brad became more of a support teacher. She worked with his classroom teachers, offering suggestions on how to include an AAC

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user in their class, including discussions about how to pose questions, giving him time to answer, cueing Brad to navigate to the correct page to anticipate answers and programming his Dynavox with new vocabulary.

She supported Brad in this capacity until he graduated from Mackay Centre School.

Brad continued to receive a variety of rehab services during this time frame. He was able to use Discover: Kenx on the computer and started spelling and using word prediction with Co:Writer. His language skills also continued to develop and he continued to learn to use more advanced morphology and word prediction features on the Dynavox 3100. It was also during this time that he received his own power wheelchair and practiced changing modes between driving and communicating.

We saw that while Brad had the skills to use a communication device and a computer, he was not able to do so independently with the Dynavox 3100. He had to be set up at a computer and have his head switches unplugged from the device and plugged into the switch interface at the computer. Living in a bilingual environment, we also recognized the need for Brad to be able to speak French. These are some of the factors that prompted us to explore an integrated communication system, which led us to the Dynavox Vmax. With this integrated system, Brad could use the Dynavox Series V software to communicate in English and French and also access Windows XP to use computer software and the Internet.

We also enlisted the services of the Dynavox sales rep, Laura Stazio at the time, to explore more advanced features of the Vmax, such as using email and text messaging. All of these steps were taken with the ultimate goal of integrating Brad into a regular school, and we wanted to be sure he
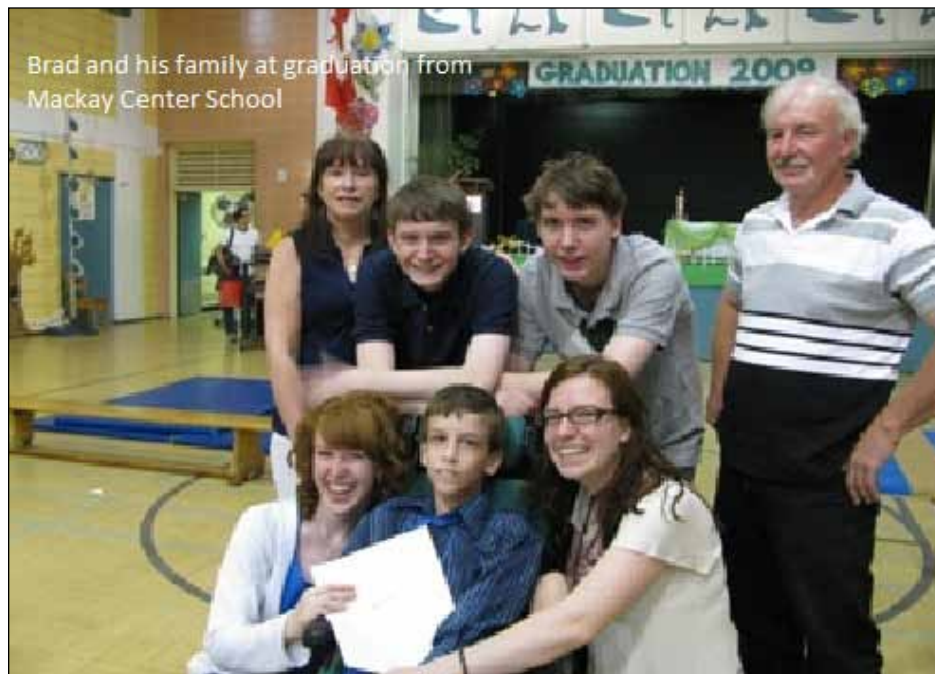
Brad and his family at graduation from Mackay Center School

was well equipped and very proficient at using his technology before heading into a less specialized and less protective environment. One of Trish's favorite experiences in working with Brad during this phase was the realization that he had taught himself how to program his own buttons – such a skilled AAC user!

As of Grade 4, Brad had begun participating in his Individual Intervention Plan (IIP). He was able to recognize what he was good at, and some of the things he wanted to explore or improve were shaped into our intervention goals. Brad wanted to explore video games, try using a headpointer for art and control the TV at home through his Dynavox. We also enabled him to use the camera through the Vmax and explored eye gaze with the eyeMax system, which Brad found more difficult than using his head switches. Brad was able to participate in a photography group using a webcam on the Vmax. In the group, students took pictures of things they found challenging and things they were good at, and wrote about how

Brad in his first pony walker (approximately 2 years old).

each of these made them feel. They then shared these photos and experiences with other members of the group and with a larger audience at a vernissage.

Brad was also able to experience the ISAAC conference in Montreal in 2008, and help his fellow students celebrate AAC awareness month by

trying to use a Dynavox with two head switches, following Brad's demonstration.

BRAD: "Leslie's class was different because I basically learned how to use my Dynavox and basic counting skills, where as in the regular classes at Mackay, I learned about Geography, Math etc. I loved the reverse integration program because I got to meet kids who were my age, and some that are still my best friends today. When I started using my power chair, I didn't like to use it because I preferred being pushed in my manual chair. But I quickly realized that I needed my power chair to be independent."

When the time came for Brad to be integrated into high school, he was already proficient at two-switch scanning using Series 5 Dynavox software. He had mastered driving his Invacare power chair with an ASL head array and his mobility and communication were all integrated. He was familiar with the mp3 features and emailing and, with the use of the cross scanning feature, Brad also had access to Microsoft Word and the Web.

The John Rennie High School team was very open-minded and flexible, which really facilitated Brad's transition. Our role at this time was to describe Brad's present tech needs – Dynavox, power chair, wifi – as well as to explore new technology.

During Brad's first high school year, his power chair was programmed to drive slowly. He was becoming accustomed to a new environment in more ways than one. The first year of high school is daunting as it is, and on top of it, Brad was driving a power chair using a head array with a communication device attached! This may seem like an overwhelming task to us, but Bradley accepted this challenge. He was persistent and head strong and this resulted in success!

Left to right: Leslie Levinson, Brad Heaven, Marc Moreau, Trish Coffin

In class, he could access the Dynavox with head switches to complete class work, assignments and homework. It was an excellent tool for presentations, as well as for surfing the Net. We supported Brad by making regular visits to the school in order to troubleshoot power wheelchair and Vmax issues, as well as to "coach" Bradley's aide, Danny, so that he could troubleshoot as well.

By Brad's second year of high school, he had mastered navigating his new environment, so the power wheelchair got a speed boost. This allowed Brad access to a selection of three speeds. At this time, Brad started to realize his Vmax was running out of memory, the battery was barely holding its charge and it was very slow. Brad and Marc communicated regularly through text messages. As Brad described the issues he was having with his device, we encouraged him to advocate for himself by writing emails to people at the school board, as well as to the Dynavox sales rep.

Because of Bradley's perseverance and the high school team, a Vmax + was ordered for him. This new equipment allowed Brad to communicate and complete work more efficiently. However, even with this brand new device, with the advancement of technology and a world of apps to discover, there continued to be some limitations.

The following year, Brad was also allotted an iPad. We worked with the high school team to find the right switch interface and an appropriate mounting system. We decided on a Bluetooth switch interface – the Tecla Shield. The Bluetooth feature was very user-friendly, and Brad didn't have wires running from the back of his chair to the iPad. Anyone who has experience working with someone who has limited control of their limbs knows how challenging wires can be! Bradley now had easy access to books, games, music and, of course, social media. We were amazed at how quickly Bradley became proficient using this set-up.

In the final years of high school, our role became more of a consult service. Brad was working closely with the high school team who, by then, really understood his needs and recognized his incredible potential. The team was persistent in making sure Bradley had all the adaptations necessary to write the provincial exams in order for him to graduate high school. And he did!

Brad's determination is infectious. All of the people that worked with him were committed to his success because of his perseverance.

Brad is also fortunate to have had the same aide, Danny, for over six years. This consistency has been pivotal to Bradley's success. Danny continues to support Bradley in college today.

BRAD: "I was sad, nervous and a bit overwhelmed leaving Mackay, but excited to start at John Rennie. Every year, I went to Leadership camp and presented a speech about myself to improve my experience at camp. I had the honor of dropping the puck at two of Rennie's hockey games, which was an amazing experience! In grade nine, I found out that I could use an iPad with my head switches since Apple released Switch Control. It opened up a whole new world for me. I can use a lot of apps on the App Store. It was also good that I still had my Dynavox, because one afternoon I had a substitute bus driver. He left me alone on the bus at a McDonald's to go to the bathroom. Right away when I got home, I told my mom and she reported the driver. Many people think that just because I can't talk, I can't comprehend things."

With Brad graduating from high school and heading off to CEGEP (junior college), he needed an upgrade in technology. He had already become very familiar with using an iPad at John Rennie, so we looked at several apps and decided on Touch Chat HD. This was another first for Trish – being able to present different options and have Brad's input on the best choice for him. Despite the fact that his usual and preferred method of communication is text-to-speech, we felt it was important that he still have access to whole words to allow him the opportunity to increase his efficiency and rate of communication. We agreed on Touch Chat HD with the My Core vocabulary set-up, as it has a keyboard with word prediction, as well as many whole words, and allows Brad to choose his method, depending on the context in which he is communicating. He is also able to use the built-in features on the iPad to type and speak, but it is more laborious than a communication app that incorporates those features. At this stage, Brad is transitioning to the Constance Lethbridge adult rehab centre, so we worked with the OT there to look at his writing and educational needs.

BRAD: "I'm attending Dawson College and it's great! I'm loving this new experience! I now have a MacBook to help me in my studies in Web Design, which I'm really excited about! It's awesome that I can use an iPad Pro and a MacBook with the help of Apple's Switch Control!"

The real key to this story is Brad's ability, but what worked very well in his favor were some important factors:

1. The team approach allowed us to look at all different aspects of Brad's needs and abilities and work together with Brad to find appropriate solutions, and the fact that many team members remained consistent throughout the journey allowed for important continuity.

2. The timing of his development closely matched the evolution of the technology, which enabled us to equip him well with devices that could meet his needs.

3. His desire to communicate and his realization of the importance of technology to enable him to do so, in conjunction with our encouragement and input into teaching him some of these skills early on, resulted in his willingness to explore various options and, ultimately, be a full participant in the process.

EPILOGUE: Brad has now completed his first year at Dawson College and here's what he had to say about it:

"My first year at Dawson was great, I love the environment of the college! The staff in the Student Accessibility Centre have been very helpful in my first year. The staff and students have been very welcoming."

We feel fortunate to have known and worked with Brad and to have had the opportunity to learn so much from him. We wish him ongoing success as his journey continues. ∎

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THURSDAY, AUGUST 18TH, 2016
1:00 PM - 2:30 PM
CENTRAL DAYLIGHT TIME

When considering augmentative/alternative communication (AAC) supports for students with complex communication needs, many people focus on the equipment. Once a device or system is selected, the real work of aided language learning begins.

The purpose of this webinar is to identify the AAC team members and discuss steps for implementation and ongoing supports to boost effective aided language learning across various contexts.

Statement of Need:
AAC learners benefit when staff and family are knowledgeable about best practices and research-based instruction for aided language learning. Attendees with be able to coordinate and advocate for a team-based approach for AAC learning. This approach supports successful AAC use and improved communication skills for students with complex communication needs.

RACHAEL LANGLEY

A Visual Makeover
THURSDAY, SEPTEMBER 15TH, 2016
1:00 PM - 2:30 PM
CENTRAL DAYLIGHT TIME

During the school years, we learn that children with autism respond well to visual supports. These visuals help students transition, complete tasks and support instruction, behaviors, social skills, communication and so much more. There is so much to create and so little time to produce all the visuals needed. We will review the benefits of visual supports, what versions these supports can come in and many websites that offer pre-made free visual supports. We will also review free or low cost websites to create your own visuals. There will be many different examples of visual supports to use throughout the day.

Statement of Need:
Educators, parents and therapists have to juggle differentiating instruction, reinforcing behaviors, supporting various sensory needs and meeting state standards all at the same time! That does not leave much time left in order to create the visual strategies that have been found effective in order to support all of these areas and more. This webinar will not only reinforce why visuals are important, but also show where to locate, how to make and how to use..

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WEBINAR PRESENTERS:

RACHAEL LANGLEY, M.A., CCC-SLP; Clinical faculty at Michigan State University, collaborator and co-founder of Michigan's #TalkingAAC Conference, Holt, MI.

MO BUTI, Ed-BD., M. Ed-ADMIN., QIPD Certification, Director of Special Education certification, Type 75 Administrator certification; Owner of AiepA. Served as Director of Program Development for Neumann Family Services. Prior to Neumann, directed autism programs and services for over 6,000 students as Manager of Autism and Intellectual Disabilities at Chicago Public Schools.

product spotlight

Assistive Technology Helps Woman With Cerebral Palsy Find Career In Cinematography

Sady Paulson was born with cerebral palsy. Assistive technology has provided Paulson with many opportunities that help her succeed in adulthood. With adaptive switches on her electric wheelchair's headrest, Paulson has learned to use various technologies that help her connect with the outside world. She earned a full scholarship to Full Sail University, where she received a degree in digital cinematography and has become a very talented cinematographer. The Anne Carlsen Center TechnoCamp at Camp Grassick in Dawson, North Dakota, has helped Paulson and many other individuals learn different technologies that have transformed their lives.

Mark Coppin, director of assistive technology at Anne Carlsen Center, first learned about Paulson's desire to edit videos at TechnoCamp. One activity individuals can learn at TechnoCamp is photography. At the end of each camp, Coppin would take all of the campers' photos and create a camp video. Paulson saw Coppin working and said she wanted to give video editing a try. "I gave her five photos and showed her how to put together a video. By the end of camp, she had created a high quality video with pictures, movements, transitions

and titles," Coppin said. "I knew I was witnessing something very special. She was only limited by the technology, not her abilities."

Paulson quickly became an expert at switch scanning, the technology that allows her to edit the videos with Apple technologies, such as the iPhone, iPad and MacBook Pro. She used a software called SwitchXS. Coppin knew the software developer, who would make changes based on Paulson's needs. Eventually, Apple included scanning software in their operating system. "It is amazing technology and it is incredible that Apple invests time and money into developing this feature into their operating system," Coppin said.

The Anne Carlsen Center TechnoCamps have drawn international attention. Coppin has conducted TechnoCamps in Ankara, Turkey, and in New Delhi, India. He also has given two presentations in the United Nations. TechnoCamps are designed to serve children with physical disabilities, and an important focus of the session is augmentative communication. Campers attend technology and music classes, participate in recreation and crafts and work on communication. Campers also enjoy boat rides, swimming, hay rides and many other fun camp activities.

This year's camp theme was "Weird Science" and focused on Science, Technology, Arts, Engineering and Math education (STEAM) activities at camp.

Campers will get to run lab experiments with Graeme Wyllie, Ph.D., from Science Academy of Concordia. "Many times our campers are not exposed to science in a meaningful way. We are taking this opportunity to showcase how science and technology can be accessible, no matter what your ability is," Coppin said. "We will have adapted microscopes, adapted telescopes, adapted cameras, telepresence robots and drones for our students to try. Campers will then make electronic books showcasing their science experiments, which we will hope to publish on the iBooks store. We also will have a TV studio set up where students will do a daily broadcast from camp."

Today's technology can level the playing field for many individuals with disabilities. Coppin's TechnoCamps are just one way the Anne Carlson Center teaches individuals the power of technology. "I never guessed that one person could affect another person's life so strongly with one simple suggestion," Paulson said in one of her videos. "However, this is true when Mark Coppin shared his knowledge of technology with me."

Today, Paulson is known worldwide for her switch scanning and editing. She has many people from all over the world following her journey. She has support from big names, such as award-winning Sports Illustrated photographer Bill Frakes. One of her biggest supporters is and will always be Coppin. He says she is an inspiration

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to other individuals. "Sady takes every technology and pushes it to the limit," he said. "Her drive and skill set and passion will help her go far. She has a bright future."

ABOUT ANNE CARLSEN CENTER

The Anne Carlsen Center has been serving individuals with disabilities and their families since 1941. At the heart of all programs and services, which are offered statewide, is our mission to make the world a more inclusive place where independence is a gift to all. We strive to give children and adults and families touched by disability or developmental disability the opportunity to dream, the chance to succeed and the ability to embrace life-changing experiences. We provide residential, educational, therapy, early intervention, autism, day support and in-home support services. In 2015, we served approximately 1,500 individuals across North Dakota.

LEARN MORE

Nessy Reading & Spelling

Nessy Reading & Spelling has been developed by a team of specialist teachers and psychologists to help children with dyslexia and reading disabilities.

- Suitable for 5-12 years
- Highly motivating
- Rebuilds self-confidence
- Improves reading, spelling and writing
- Guides children through the program
- Delivers activities that strengthen phonemic awareness, fluency, vocabulary and comprehension skills.

Nessy Reading & Spelling is an online program.

It can be played on any computer or tablet with an Internet connection.

INCLUDES

- 100 structured lessons
- 100s of video strategies that explain the rules of English
- 1000s of printable worksheets and card games
- 100s of games to develop blending, phonemic awareness, reading speed, rhyming, fluency, vocabulary, comprehension and spelling

"It was more extensive and inclusive than any other product I purchased and responsible for 100% of our reading success." Gail Camenzind

WHAT IS THE SECRET BEHIND NESSY READING & SPELLING?

1. Assessment Tools: Assessments align learning targets for each student's reading level. In addition, reporting delivers performance data and analysis in a simple-to-understand format, and color-coding allows teachers to immediately identify and target areas of individual difficulty. What's more, the initial evaluation helps to create a baseline score upon which progress is measured.
2. Individualized Approach: An individualized approach allows students to learn at their own pace.
3. Rewards: Student progress is rewarded by completing fun game-like activities that then unlock new games, characters and magical worlds.
4. Strategies: Within the animations, Nessy embeds memory strategies that help students encode important rules.

Everyone can succeed when they can learn at their own pace and in a way that suits their learning strengths.

OTHER NESSY FEATURES:
- Offers Common Core progress monitoring.
- Predicts student performance at a glance.
- Presents research-proven technology that accelerates reading skills.
- Guides student learning without the need for one-on-one intervention.
- Offers structural analysis – the ability to break words into the root, prefix and suffix.
- Develops reading automaticity – the ability to read without having to think about each word, freeing working memory for comprehension, visualization and creativity.

"Nessy is an awesome program. It is extremely easy to navigate and the reinforcement activities are plentiful. During our summer program, the 2nd grade students asked daily to use Nessy. I found that three of my most academically challenged students enjoyed Nessy tremendously. These three students always walked out of the computer lab feeling accomplished. There is nothing better, as a teacher, than to see your students when that light bulb goes off and they get it!!" Sandy Vitale

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