Connecticut Tech Act Project

Achievement Through Technology

CTTAP NEWSLETTER
Winter 2020

Connecticut's Nicole Natale Receives Francis C. Dixon Advocacy Award from TechACCESS of Rhode Island

Nicole Natale, a Senior Education Specialist for the CREC Resource Group, has received the Francis C. Dixon Advocacy Award.

By Lisa A. Fiano, MA CAGS, Capitol Region Education Council (CREC) Education Specialist

Nicole Natale, a senior education specialist for the CREC Resource Group in Hartford, has been honored with the Francis C. Dixon Advocacy Award.

Established in 2014, the Francis C. Dixon Award is presented annually by TechACCESS of Rhode Island to recognize the outstanding efforts of agencies or individuals who have advocated for the rights of those with disabilities. Nominees for this award are distinguished by actions that have impacted and informed policies and practices that can effect positive change in their communities and beyond.

Nicole received the Dixon Award during November's

Assistive Technology Conference of New England in Warwick, RI. The conference, which is hosted by TechACCESS of RI, is dedicated to technology, people with disabilities, families and professionals.

"It is an honor to receive this award," Nicole said in her acceptance speech at the conference, "but I receive it on behalf of many people – since in assistive technology, nothing gets accomplished alone. This award represents collaboration with my colleagues Carolann and Lisa, our team at CREC, the RESCs and other AT colleagues, and our partnership with the CT Tech Act. Most importantly, however, it embodies the work we do every day with the professionals in districts who, even when it is hard, even when it requires jumping out of their comfort zones and even when it requires significant change, show up anyway to help our students achieve their potential."

Nicole joined CREC in 2007 and leads CREC's work in assistive technology (AT). With more than 16 years as a speech-language pathologist and assistive technology practitioner, Nicole has focused her work with school districts on building capacity of teams in providing AT supports and services to students with disabilities. She created CREC's Assistive Technology Consortium, which currently has 16 member districts from across Connecticut. Nicole also created CREC's lending library, which loans low-, mid- and high-tech AT devices to its Consortium members. She provides professional development, technical assistance, and training on a variety of topics regarding AT, inclusion, and adaptations for students with disabilities and Universal Design for Learning. She completes evaluations for students who require AT to access the general education curriculum, as well as for students who require augmentative and alternative communication (AAC). Nicole also uses her expertise to conduct program reviews and audits of districts' special education programming in order to effect change for students with disabilities.

Nicole has also co-authored a number of publications, including "The Assistive Technology Guide for Maximizing Learning for Students with Autism" and "The Blueprint: Building Powerful Special Education Practices." Nicole was a member of the writing group that co-authored the Connecticut Assistive Technology Guidelines.

Nicole earned her B.A. from the University of Connecticut and a master's in Communication Sciences and Disorders from Pennsylvania State University. She holds a number of professional certifications, including an American Speech-Language and Hearing Association Certificate of Clinical Competency; a State of Connecticut Department of Education Speech-Language Pathology certification; and an Assistive Technology Professional Certification from the Rehabilitation Engineering and Assistive Technology Society of North America.

My Experience with Assistive Technology

By René Lambert

Assistive technology helps disabled people with disabilities to do more for themselves. It helps with mobility. Ultimately, assistive technology boosts long-term engagement in the lives of people with physical and mental impairments, improving their overall experience and supporting their contribution to society. This is definitely the case for me.

Let me share my story with you.

I was born on September 25, 1999, on the island of Jamaica. At the time of my birth my family lived in St. Elizabeth, a rural area. Eventually we needed to move to Kingston Capital, where there were a bit more resources for people with disabilities. Growing up

in Jamaica was the best thing that ever happened to me, despite the fact that it was a constant struggle for my family in regard to finding suitable assistive technology and disability services. However, this did not stop me from excelling!

Being the youngest of four girls, I saw my older sisters go to school every day. This was one of my motivations for wanting to excel at academics. For three years, I attended a school for children who had severe special needs, but, I started to feel frustrated because I was not being academically challenged. Around the age of seven, my mom enrolled me in a fully academic institution. It was at this time, the eldest of my three sisters, Tameka, brought home a laptop from Canada where she had been visiting for a couple months. Eventually, Tameka allowed me to have access to her computer. And that was the start of my independent exploration of computers. My mom had always had a desktop computer in the house, but it was often difficult for me to use. I noticed from the tender age of three or four, while we were still living in St. Elizabeth, that I would have a hard time maneuvering the attached mouse, let alone navigating the keyboard. Using a laptop instead of a traditional desktop computer was easier for me because the keyboard and touchpad were always in a stationary position.

At the same time that I was experimenting with Tameka's computer at home, my teachers would often allow my classmates and me to use their laptops as a reward for good behavior. I often got a chance to use their devices, and I did not hesitate to soak up everything I could observe about how these computers worked. A couple of years after, the smartphone revolution took place and my family brought smartphones and tablets home. As it was with the laptop computers, so it was with smartphones and other devices. I observed how they were being operated by those around me, then I tried it out myself. If I was not getting my hands to do what I wanted with the device, I figured out how to make it work. Giving up was – and still is – not an option for me. Throughout my school years in Jamaica, from 2007-2017, I always did assignments via the computer, because of my inability to physically write clearly with a writing utensil.

It was not until I migrated to the United States two years ago that I was exposed to the full extent of disability services and assistive technologies. I attended Manchester High School, where all students were provided with an individual Chromebook. At school, assistive tools were put on my school laptop to make my experience with computers a lot smoother. I also had access to a power wheelchair molded to my body. In Jamaica, I would have to use a manual wheelchair and someone had to push me at all times.

Coming to America has opened doors for me and allowed me to receive the necessary services to help me live a more independent life. Here in the U.S., I've also gotten the opportunity to receive physical therapy and medication to help with relaxing my muscles. These are all things that I would have had to struggle to obtain back home in Jamaica. I hope to help my homeland of Jamaica reach its full potential as it relates to providing disability services for its citizens with special needs. Assistive technology is of tremendous benefits to those who need it. Assistive technology can provide a gateway to success.

The Assistive Technology Loan Program Makes a Difference in a Family's Life

By Muriel Aparo, Manager of the Assistive Technology Loan Program (ATLP) Connecticut Tech Act Project

The Assistive Technology Loan Program (ATLP) works to help individuals with disabilities, and their families, obtain low-interest-rate loans to purchase the assistive technologies that they want or need. Loans can be provided for such items as alternative augmentative communication (AAC) devices, hearing aids, computers, mobility scooters, wheelchairs, ramps, modified vehicles and many other assistive technology tools.

Before considering an applicant for a loan, the ATLP always tries to help find funding that the individual does not have to pay back. These grant funds can help defray the cost of a device, thereby decreasing the amount a person needs to borrow from the ATLP. This past year, 10 individuals applied to various grant programs for funding. Applicants successfully obtained grants from 11 different organizations and 2 GoFundMe campaigns, totaling $187,146.77.

In May 2019, the Connecticut Tech Act Project, through the ATLP program, was able to assist a family that had been trying for many years to obtain a much-needed modified van for an individual with Anoxic Encephalopathy, a degenerative disease of the brain. This individual, who used a powered wheelchair, had to rely on public transportation and friends – and hope for good weather – to get to medical appointments. When relying on friends to bring him to appointments, these same friends had to help him transfer to his manual wheelchair, both into and out of their vehicles, a time-consuming and fatiguing experience.

This individual's spouse, the sole provider for a family of 5, has had to work 2 jobs to keep the family afloat. But this still was not enough. To help defray the cost of the van, the family started a GoFundMe page and raised $2,550. This amount, though helpful and appreciated, was not enough to bring the amount of the ATLP loan down to manageable monthly payments. The CT Tech Act Project Loan assisted the family with identifying and applying for several grant programs. Between the GoFundMe fund-raising and grants, the family was able to reduce the loan amount needed. They received approval for a loan through the ATLP bank partner, Berkshire Bank.

The CT Tech Act Project would like to give a big **thank you** to the PLAN of CT Charitable Trust for being a part of the solution for this family and several other ATLP applicants. The CT Tech Act is grateful for all the organizations that contribute to helping our consumers. Together, we have made a positive difference in the lives of the individuals we serve!

Digital Accessibility Tip! Color Contrast

by Adam Kosakowski, M.Ed., ATP, Assistive Technology Specialist at New England Assistive Technology (NEAT), an Oak Hill Center

Reading text and viewing content online can be difficult if there is not sufficient color contrast. This is especially true if you have a visual disability or colorblindness. Even if you don't have a disability, try this: Look at the following picture as if you were watching *The Simpsons* TV show from a couch that's 10 feet away. The subtitle says, "and the ref waves off the icing" in the same color yellow as Bart's arm. The color contrast, or luminosity contrast ratio (or more simply, the difference in color), between the two yellows is slim to none. This low color contrast makes this text inaccessible to people with disabilities, and practically imperceptible in the general sense of the word, which impacts everyone.

and the ref waves off the icing.

You might be thinking to yourself, "OK, make the text black, and that'll fix this, right?" Even if you did change the text to black, you would be using your eyes to decide if the color contrast is high enough. The problem is, everyone perceives color differently. So, a more scientific approach is needed to measure color contrast.

Enter the **Web Content Accessibility Guidelines (WCAG).** These guidelines are created by the World Wide Web Consortium's (W3C) Web Accessibility Initiative (WAI). WAI partners with organizations around the world to create the WCAG with the goal of making the web as inclusive as possible. While these guidelines are not legally binding in the U.S., they are binding in other countries and are generally accepted as the authority worldwide. Basically, to be legally compliant in the U.S., it's safer to follow these guidelines than not.

According to the WCAG version 2.1, the color contrast ratios we're looking for are at least 4.5:1 to pass WCAG criterion 1.4.3. But, what do those numbers mean? And, how do we measure them? I'm happy you asked, because there is a free tool called the **Color Contrast Analyser** by the Paciello Group. Using this Windows and MacOS tool, you can analyze the foreground and background colors of any content on your

computer screen and it will tell you whether the colors pass the color contrast guidelines of the WCAG.

To use the Colour Contrast Analyser, click on the eyedropper tool, which will change your cursor to a target icon. Then, click on the appropriate color for the image you're analyzing. So, for foreground color, you'd use the eyedropper tool on the color in the foreground; in our example here, that's the yellow of the subtitle text. Then, you'd do the same for the background color; for our example here, you'd use the eyedropper tool on the yellow of Bart's arm. As you can see in the screen shot above, the 2 yellows fail the 1.4.3 contrast requirements. You can even click on the arrow to the right of each listed criterion to drop them down for more explanation. In the screenshot above, you can see that the yellows fail 1.4.3 for small font sizes like 14-point as well as large font sizes like 18-point.

This tool can be used on any color your screen is displaying. Try it out! I use it to measure the color contrast of anything that may be remotely questionable, including PowerPoint colors, font colors, picture colors, etc. That way, I can be sure the content I send out is as accessible as possible.

To learn more about color contrast, read this **WebAIM article on Contrast and Color Accessibility**
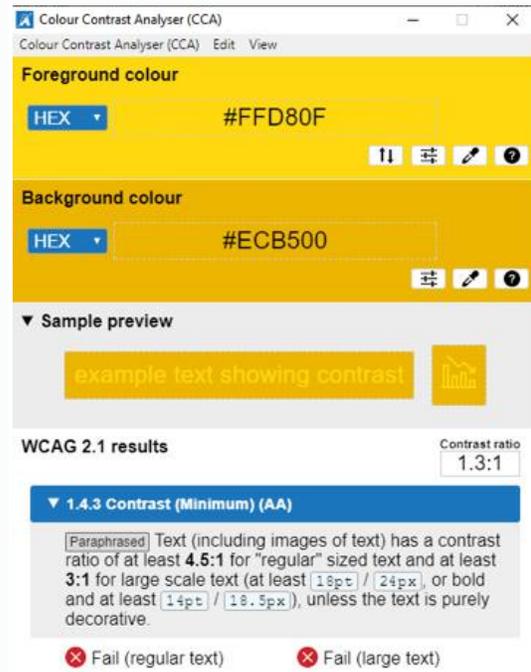
Cutting Edge Technology Creates Completely Customized Keyguards

By Ann Bedard, MS CCC-SLP, EASTCONN AT Specialist
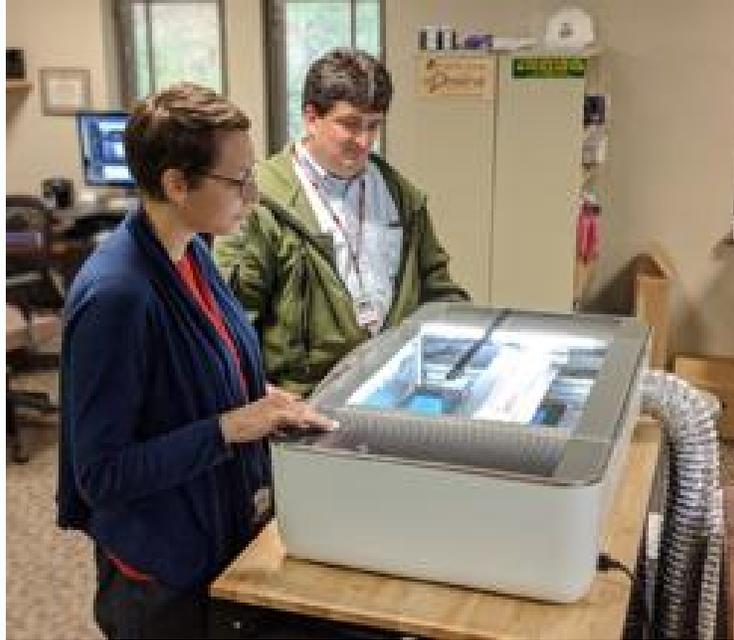
EASTCONN AT Specialist Ann Bedard, left, collaborated with EASTCONN Technology Solutions Director Andy DePalma to manufacture customized iPad keyguards for students, using an in-house laser cutter.

Recently, staff at Willington Public Schools contacted me for an Augmentative and Alternative Communication assessment for an elementary school student. Following a team meeting, interviews and observations, I determined that a dynamic display, touch-screen device (iPad) might best meet the student's needs. Next, I needed to adjust the size of her vocabulary page. But one was thing missing: In order to support her access, we needed a keyguard for her AAC device to accommodate her Cortical Vision Impairment and motor impairment. Unfortunately, the time and cost required to purchase a custom keyguard online was less than ideal. So, I turned to colleagues in EASTCONN's Technology Solutions group for help.

I knew that EASTCONN's Technology Solutions department had a new, in-house Glowforge 3-D laser cutter (depicted above), and that they had the expertise to precisely manufacture hard-to-find technology parts like the keyguard. I contacted Technology Solutions Director Andy DePalma, who was happy to help. I provided a screen shot, and Andy used it to calculate the iPad's vocabulary grid specs, and programmed EASTCONN's laser cutter to manufacture a keyguard that perfectly matched. This "home-made" keyguard was produced at minimal cost and was just as durable and well-made as the commercially available ones. An added benefit? The custom keyguard was created after I'd met just once with Andy, and it was delivered to the Willington student the same day.

A couple of weeks later, Killingly Public Schools requested a keyguard to test with one of their elementary school students, who was also using an iPad for communication. Killingly staff had explored the available keyguards, but wanted to change a few features. Using the laser cutter, EASTCONN's Andy DePalma once again collaborated with me to create a customized keyguard that matched exactly what Killingly needed for its student.

I couldn't wait to share this story! As an Assistive Technology Specialist, I was thrilled to discover this great, new, EASTCONN technology resource. Going forward, it will help

me meet the needs of individuals, from youth to adult, across EASTCONN's northeastern Connecticut region.

To learn more, contact Ann Bedard at **abedard@eastconn.org**.

Note: Willington Public Schools and Killingly Public Schools are EASTCONN AT and AAC Consortium members.

Reminders in the New Apple iOS

### By Lisa A. Fiano, MA CAGS, Capitol Region Education Council (CREC) Education Specialist

There are many reminder apps and extensions in all of the major operating systems. However, the built-in app in Apple iOS has often been overlooked for other options with more features and ease of use. But now, Apple has completely redesigned its latest version of the app to include a new look, interface and integration between iOS apps and devices.

Reminders are divided into four main sections, which are visible in one view. The main view can separate your reminders into a single list; into a list with flags; into "scheduled" categories;" and into lists that need to be completed "today." You can also create as many customized lists as you'd like within this main view.

You can create reminders using a variety of inputs, such as a keyboard, speech input, or Siri. Your reminders will also sync across all of your iOS devices, including the Apple Watch.

Below is a list of helpful options for users with disabilities.

1. **Customize the title of your reminders with custom colors and symbols** This is a nice way to add visual supports to lists for individuals who may benefit from this customization. It also makes each list more eye-catching and interesting. This can be done when creating a new list or from the menu options in the top right of the list screen. The image below is from the main view of the reminders app. You can see the customization of each list under "My Lists."
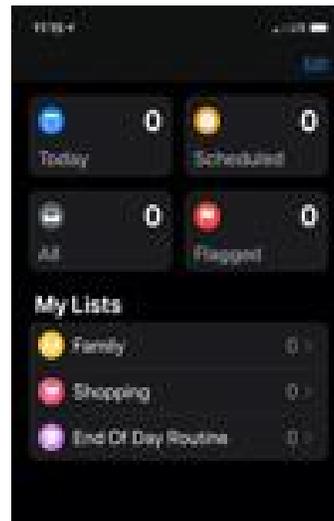
2. **Set reminders by date, time, location and other conditions** There are also several features that allow you to add dates, times, locations and other conditions to each reminder in a list. Users can essentially create a visual schedule with reminders that can be customized according to where and when these

reminders need to be executed. Reminders can also be set to occur when the user is messaging a particular person, which comes in handy when you need to remember to ask mom to sign a permission slip for a field trip on Friday. Siri can also craft your reminders if you'd rather not use the keyboard. For example, you can tell Siri, "Hey Siri, remind me to get cat food when I get to Big Y in Marlborough on Saturday." Below is an example of the reminder conditions that could be added to an "End of Day Routine" list with visual supports.
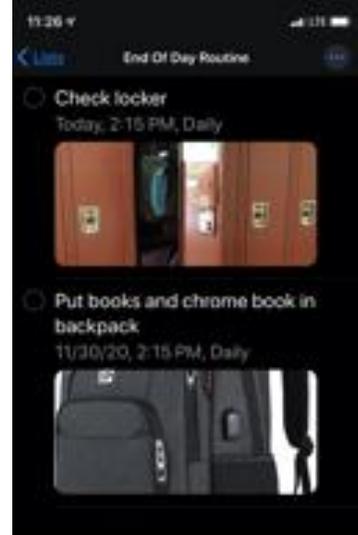

3. **Create a website reminder from Safari** Do you need information from a website to complete a task on your to-do list? Now you can link a website to a reminder on your Apple device. You can accomplish this from the Share button in Safari. The icon from Reminders should show up in your favorites when you select the Share button. For example, if a user needs to read an article for homework, you could share the article to Reminders and add all of the other conditions to the reminder including the link to the article. See the screenshots below.
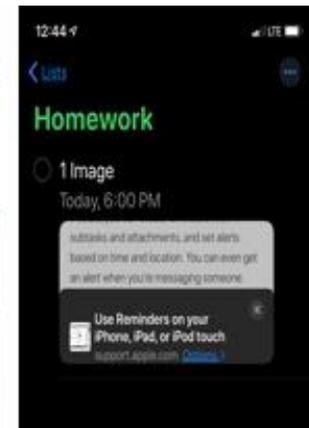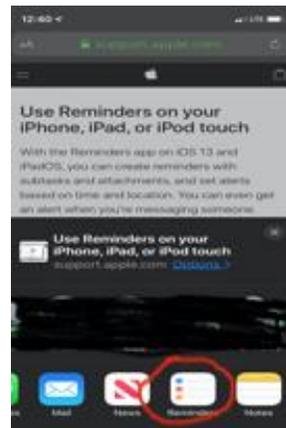
4. **Use the custom toolbar in Reminders** There is a quick access toolbar in Reminders that allows you to customize your reminders. This custom toolbar pops up below your new reminder and above your keyboard. You can add a photo, a document, date, time, location and flag from the tool bar. This makes setting customization very easy. Access to the toolbar may reduce the steps a new user needs to learn to make full use of Reminders.

5. **Create sub-items in a reminder list** It can be really helpful on a very hectic day to create a list of all of the items you need to accomplish before the day's end. Each one of those items might also have several other tasks within it. Now, you can create nested items within your reminders. This allows users to break down big tasks into smaller tasks. You can imagine how this can be helpful in the classroom or on the job. You can create a nested task by swiping right on any reminder to reveal an "indent" button that will list the reminder under the main task. The screenshot below shows all lists with nested items for each reminder.
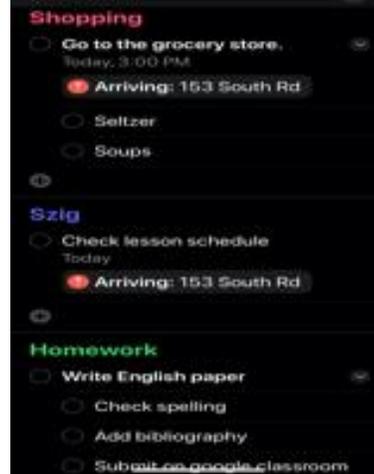
This is just a sample of the many ways to use the new Reminders in Apple iOS 13. There are a number of great articles and YouTube videos on how to use Reminders. It is also worthwhile to be up-to-date on how to command Siri if you plan to use a virtual assistant to create your reminders. Here is a link to a website that was used as a reference for this article: **https://www.macrumors.com/guide/reminders/**

NEAT has a Smart Tech Lending Library!

By Kristopher Thompson, NEAT, Aging in Place Specialist, Oak Hill

Smart technology holds great potential to help people regain control of their home environment and remain socially connected. These devices typically connect via a home wireless network and provide services that respond to the needs of users. Common devices include sensors, door locks, smart speakers and thermostats that can be controlled in a number of ways. But many people don't know where to begin. For Alice, that first step was to contact New England Assistive Technology in Hartford, Conn., for a Smart Home Assessment. Alice, a senior who was aging in place and living with vision loss, wanted an easy way to control her lights and stay connected with her loved ones. For her, the perfect solution consisted of an Amazon Echo smart speaker and smart bulbs. She is now making calls, completely hands-free with voice commands, and her lights are set to automatically turn on at certain times of the day to ensure she has the proper lighting when she needs it.

Frank, who had mobility challenges, sought hands-free calling, a hands-free intercom system to communicate with his wife throughout the house, and calendar access to stay on top of his daily tasks. He already owned an iPad and Amazon Echo devices, which allowed NEAT to dive right in and teach him about capabilities and accessibility features on the devices he already had. Frank implemented the Drop-In feature, which allows him to speak between the Echo devices that are placed throughout his home. He also receives reminders from these devices, and his iPad, to help with his daily agenda. For so many like Alice and Frank, being able to learn about these solutions first-hand is the best way to realize how simple and empowering this technology can be.

Gaining control of one or two tasks could make a big impact in the daily lives of so many people. Could you or someone you know benefit from the independence that smart technology can provide? The NEAT Center's new, free lending library could be that first step to greater independent living. This resource allows individuals to have 30 days of hands-on experience with popular smart tech solutions to help them get familiarized and make an informed decision.

Devices include:
Apple Watch Series 4, Amazon Echo, Amazon Echo Show, Amazon Echo Show 5, Amazon Echo Spot, Amazon Echo Dot, Amazon Echo Buttons, Google Home Mini, Google Home Hub, RING Doorbell, Philips HUE Smart Lights, Logitech Smart Cam, Multipurpose Smart Sensors, iPads, Smart Plugs, ePill Automatic Pill Dispenser
Contact NEAT for more details!

Have an event of interest to persons with disabilities, their family members or caretakers and those who work with them to support their development and maximize independence?
If you would like that event to be included in the CT Tech Act Newsletter, please send a notice and contact information to
Carol Magliocco at **cmagliocco@eastconn.org** or call 860-228-3483.

Should you experience any difficulty accessing the content in this newsletter, please contact Arlene Lugo at **Arlene.Lugo@ct.gov**

CTTAP MISSION: Increasing independence and improving the lives of individuals with disabilities through increased access to Assistive Technology for work, school and community living.

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