



AT 101: Understanding and Advocating for Assistive Technology

Maria T. Kelley, WATAP | Martha Rust & Carolyn Phillips, Tools for Life With contributions from Christopher Lee, Liz Persaud & Ben Jacobs & Ben Satterfield www.gatfl.org

For Handouts: http://www.gatfl.gatech.edu/tflwiki

LDA 2016 Conference





Welcome to the Assistive Technology Revolution!

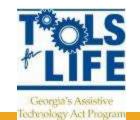
The world around us is evolving at an astounding rate. Assistive Technology developments have been foundational in this evolution and a catalyst for producing positive life-changing results for individuals with disabilities.

This session will take a closer look at:

- AMAC | Tools for Life AT Act Program
- Advocacy & Knowing Your Rights
- Making and LD Evaluation Your Action Plan
- Understanding Assistive Technology
- Using "Low/Light Tech" to inform "Mid/High Tech Solutions"
- 5 Trends to Watch
- where we are and perhaps, where we are going.

...all in 60 minutes!

For Handouts: http://www.gatfl.gatech.edu/tflwiki





AMAC

AMAC Accessibility is a social change organization on a mission to create affordable services for governmental, private and nonprofits organization working with individuals with disabilities. Services include e-text, braille, captioning, assistive technology, office management software and consulting.





Accessibility Made Smart

AMAC creates practical solutions that work, with a focus on utility, ease of use, and high quality.

- Accessibility Consulting focuses on organizational accessibility needs with evaluation, technical assistance, customer support, and website accessibility solutions.
- **Braille Services** produces customized projects from both print materials and electronic text including partial books and chapters or graphics only using cutting-edge technology.
- **Captioning Services** makes classrooms, meetings, labs and other audio environments fully accessible for deaf or hard-of-hearing.
- Professional E-Text Producers provide high-quality e-text in many formats such as PDF, DOC, DAISY, and HTML.
- **Certified Assistive Technology team** provides on-site and remote assessments, demonstrations, training and technical assistance for education, work, and daily living environments.

For more information, please visit our website at www.amacusg.org



TFL AppFinder

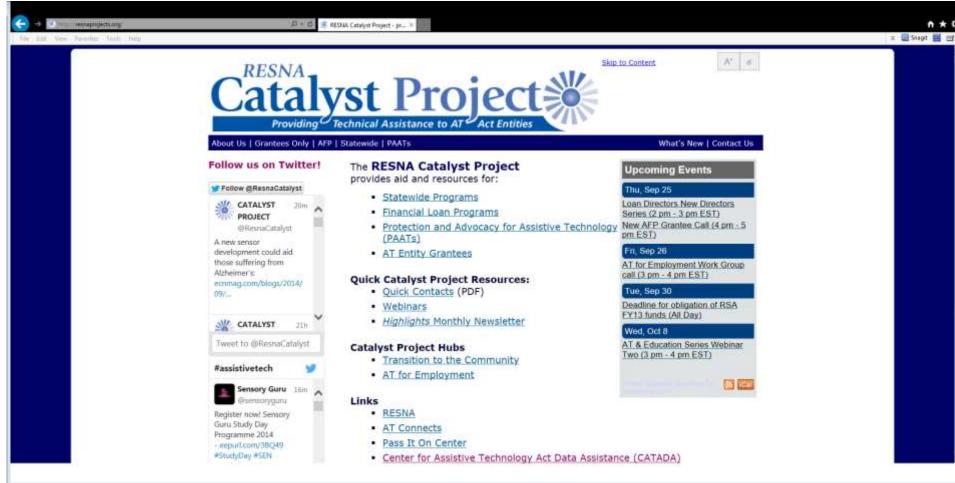








Get to Know Your AT Act Program



http://resnaprojects.org/



Why Assistive Technology?

- For a person without a disability, technology makes things easier....
- For a person with a disability, technology makes things possible.
- TIP: USE AT. I have yet to meet a successful student with disabilities who doesn't use Any AT.



AMAC Accessibility for All

What is an AT Service?

Assistive Technology Services

Any service that **directly assists an individual with a disability** in the selection, acquisition, or use of an assistive technology device.

Includes:

- Evaluating
- Providing devices
- Selecting, Designing, Customizing
- Maintaining, Repairing
- Coordinating
- Training/Technical Assistance student, family and school service providers

- Public Law 105-394 [29 USC 2201]



Assistive Technology Continuum

Observations & "Hanging out with Intent"

Assistive Technology is a **continuum of tools, strategies, and services** that match a person's needs, abilities and tasks.

Low/No-tech Mid-Tech High-Tech • pencil grip word prediction computer/laptops · adapted books text to speech tablets/phablets slant board speech to text smartphones, highlighters, tape spell checkers smartpens magnifiers talking calculators OCR scanner/software color coding digital recorders magnification software read to out loud organizers speech output devices • picture schedule e-books switch, joystick access strategies for memory adapted keyboard scanning access colored transparencies adapted mouse voice recognition Proof readers environmental adapted toys note taker CCTV control devices apps under \$100 • apps over \$100



Moving from Information to Action

Evaluations for Learning Disabilities

- □ One to one assessment
- □ Comprehensive battery of tests
- Detailed report with recommendations for support in work and/or learning
- What did You learn in your LD Evaluation?
- Moving from Information to Action
 - Using your Evaluation results as an Action
 Plan for AT



Auditory Processing Disorder (APD)

- "Also known as Central Auditory Processing Disorder, this is a condition that adversely affects how sound that travels unimpeded through the ear is processed or interpreted by the brain. Individuals with APD do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard. They can also find it difficult to tell where sounds are coming from, to make sense of the order of sounds, or to block out competing background noises."
- What does this information tell us regarding our AT Action Plan?

http://ldaamerica.org/types-of-learning-disabilities/



Dyscalculia

- "A specific learning disability that affects a person's ability to understand numbers and learn math facts.
- Individuals with this type of LD may also have:
 - poor comprehension of math symbols,
 - may struggle with memorizing and organizing numbers,
 - have difficulty telling time, or
 - have trouble with counting."
- What does this information tell us regarding our AT Action Plan?

http://ldaamerica.org/types-of-learning-disabilities/



Dysgraphia

- "A specific learning disability that affects a person's handwriting ability and fine motor skills.
- Problems may include illegible:
 - handwriting,
 - inconsistent spacing,
 - poor spatial planning on paper,
 - poor spelling, and
 - difficulty composing writing as well as thinking and writing at the same time."
- What does this information tell us regarding our AT Action Plan?

http://ldaamerica.org/types-of-learning-disabilities/



Dyslexia

- A specific learning disability that affects reading and related languagebased processing skills. Dyslexia is sometimes referred to as a Language-Based Learning Disability.
- The severity can differ in each individual but can affect:
 - reading
 - fluency,
 - decoding,
 - reading comprehension,
 - recall,
 - writing,
 - spelling, and
 - sometimes speech and can exist along with other related disorders.
- What does this information tell us regarding our AT Action Plan? http://ldaamerica.org/types-of-learning-disabilities/



Visual Perceptual/Visual Motor Deficit

- A disorder that affects the understanding of information that a
 person sees, or the ability to draw or copy. A characteristic seen in
 people with learning disabilities such as Dysgraphia or Non-verbal
 LD, it can result in:
 - missing subtle differences in shapes or printed letters,
 - losing place frequently,
 - struggles with cutting,
 - holding pencil too tightly, or
 - poor eye/hand coordination.
- What does this information tell us regarding our AT Action Plan?



- What does this information tell us regarding our AT Action Plan?
- Avoid the temptation of a "cookie-cutter approach"
- Customize approach No 2 individuals are the same. We all have different strengths and Abilities to build upon.



AMAC The "FAST" Track

- Frustration
- Anxiety
- Stress
- Tension



Human Activity Technology (HAAT) Model

- Human: represents the skills and abilities of the person with a disability
- Activity: a set of tasks to be performed by the person with a disability
- <u>Context</u>: the setting or social, cultural and physical contexts that surround the environment in which the activity must be completed
- Assistive Technology: devices or strategies used to bridge the gap between the person's abilities and the demands of the environment



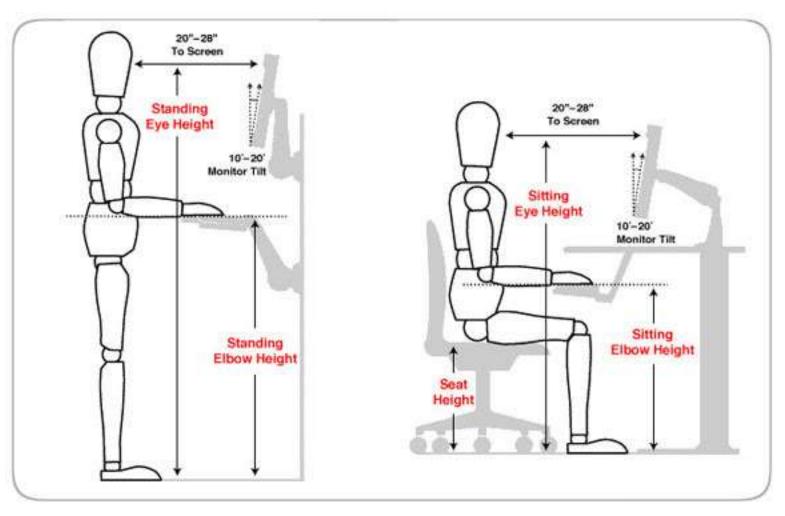
Ergonomics

- Inhibits blood flow
- Creates muscle shortening
- Stresses back muscles and compresses spine
- Can inhibit learning
- Compresses diaphragm
 - Affects breathing
 - Voice quality





Ergonomics in the Classroom





Lumo Lift

- Lumo for back and head/shoulders
- Sends gentle vibration alert when posture needs to be corrected





Know Your Tablets



Microsoft Surface

- Windows 10
- Slim and has a USB port
- Moveable Tiles
- Built-in Accessibility
 - Speech-to-text
 - Narrator
 - Magnifier
 - High contrast
- Thin pressure sensitive cover that doubles as a keyboard
- Starts at \$499







Samsung Galaxy Tab 4







- Android System
- 7, 8, 10, 12 or 18" in screen
- Camera
- Micro card
- Wi-Fi
- USB for computer
- Some built-in accessibility app
 - Download others
- Starts at \$149.99



AMAC Apple iPad Pro/Air/Mini

- Multi touch screen
- Smart Keyboard with iPad Pro
- New iOS 9
- Millions of apps
- Surf web
- iTunes
- HD Video
- Organization
- Accessibility
- Books
- Photos
- Speakers
- 5.0 megapixel camera









Tools for Life AppFinder



TFL AppFinder



Search by:

- ✓ App Name
- ✓ Categories
 - Book
 - Education
 - Environmental Adaptations
 - Hearing
 - Cognition, Learning, Developmental
 - Navigation
 - Personal Care and Safety
 - Productivity
 - Communication
 - Therapeutic Aids
 - Vision



Low Tech AT Solutions







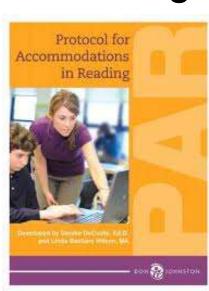






PAR: Protocol for Accommodations for Reading

- Don Johnston
- Assist with accommodations for reading
- 3 Steps
 - 1) Student's Oral Reading
 - -2) Adult Reader
 - -3) Text Reader
- How did the student like?
- Help with adding in AT for reading solutions

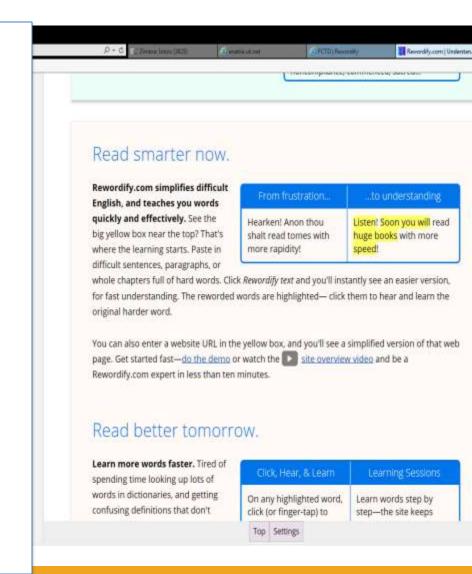




Rewordify.com

"Rewordify is a free website that makes English easier to read. In some ways it is similar to a thesaurus, but allows users to enter not just single words, but entire sentences, pages, and even websites, for clarification. Passages are preferred, as difficult words are 'rewordified' using the context of the sentence. For example, paste in "The tempest raged outside while the throng huddled inside.", and it is 'rewordified' into, "the storm raged outside while the crowd huddled inside."

Students can use this tool to make passages more understandable. Simplified words are highlighted for quick comparison with the original word(s)."





Victor Reader Stream (new generation)

 Handheld media player by Humanware



- Plays DAISY books, MP3, MP4, EPUB
- Records voice and media
- Two built-in, humansounding voices
- Built-in wireless networking capability
- \$369



Reading Pens

- Scans text,
- Hear it spoken aloud
- Obtains definitions and correct pronunciation within seconds
- Variety of types
 - Wizcom
 - C-Pen Reader
 - IRISPen
 - PenPower
 - Video Touch Pen by MoralRegion







AnyBook Anywhere

- Use to record your voice reading the story
- 200 hours of recording
- Works with any book
- Store recordings on a virtual library
- Share collections with friends
- \$49.99
- Amazon.com





Learning Ally

- Learning Ally
 - DAISY
 - Membership required
 - over 75,000
 audiobooks, audio
 textbooks, and other
 recorded books
 - Free Trial





Bookshare

- Online Accessible Library
- Free membership to qualified students and schools
 - Textbooks if school is member
- 389,675 titles
- Serves individuals with:
 - Vision disabilities
 - Physical disabilities
 - Learning disabilities





Audible.com

- Digital audiobooks
- Read by Hollywood stars, authors, and professional narrators
- Listen anywhere
- Over 180,000 titles
- Membership
 - \$14.95/ month for one book





Mobile Tablets/ eReaders

- What do I need?
- Does it read out loud?
- Do I need Apps?
- Change colors?
- Change line spacing?
- Textbooks?
- Fun Reading?





ClaroSpeak US



ClaroSpeak speaks back text with high-quality speech and highlighting so you can follow the words as they are spoken.

Tap the screen to place the 'cursor point' in the text. Then tap the Play icon to start speaking.

The text will be spoken from the start point with the highlighting and voice you have selected in Settings. To stop ClaroSpeak speaking, tap the Stop icon or tap anywhere in the ClaroSpeak title bar.

- Text-to-Speech
 - import documents and PDFs into ClaroSpeak from apps such as Mail, or import PDF, Word, Pages and other files directly from Dropbox using
- Change font and color
- Save text as an audio file
- Visual Tracking
- Send Text



ClaroRead

- Reads text as it highlights
- Moveable tool bar
- Can read doc, PDFs, internet, and more
- 7.0
 - Add audio notes
 - Save as mp3 file
 - Save as video

- Can change highlighting colors
- www.claroread.com





Kurzweil 3000

- Text-to-Speech software
- Helps improve reading speed and comprehension
- Note taking capabilities
 - Different color highlighters

- firefly
 - Access many features of Kurzweil through the internet
 - firefly demo
- Free download trial
 - www.kurzweiledu.com
 - Kurzweil 3000 Demo





TextHelp

- Text-to- Speech software
- Helps improves reading skills
- Built in text and picture dictionaries
- Study skills highlighter

- Has a Google Chrom version
- www.texthelp.com





WYNN

- What You Need Now
- Freedom Scientific
- Scanning and Reading software
- Highlights text as spoken
- Icon friendly
- Built in study tools

Internet Features

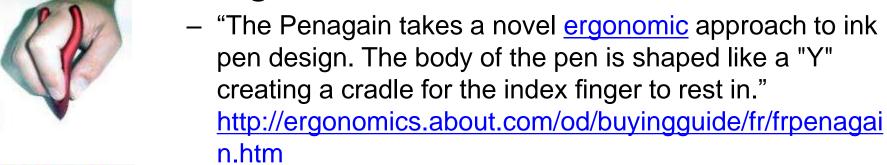


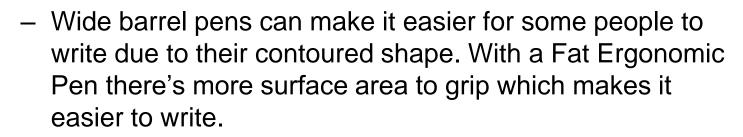




Low Tech Solutions













Low Tech Solutions

- Built up grips
 - Variety
 - Create your own using tennis balls
- Larger / thicker pencils
- Electronic Spellers
 - Franklin Spellers







Live Scribe Pen

- Records what it hears and what you write
- Uses specific paper for playback
- Connects to computer by USB for saving
- Tap on note and playback from there
- Jump forward and back in notes
- Dictionary
- Translation Apps
- Purchase Apps online
- Demo





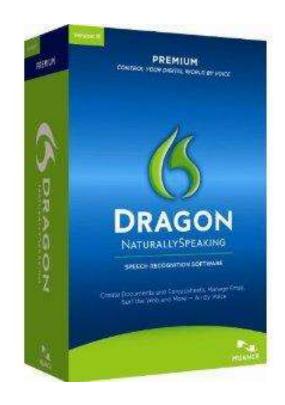
Voice Input Solutions



 Turn spoken words into text

Accessibility for All

- Connect with the timing of your thoughts
- Dictation speed 70 to 100 words per minute

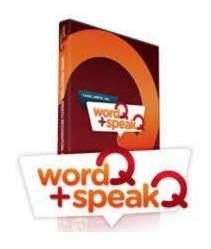




Word Q/ Speech Q

- Software that has built-in word prediction
- Suggests words
- Spoken feedback to hear what was written
- Speech Q is a plugin for Speech Recognition

 30 day free trial http://www.goqsoftware. com/trial/





Ginger

- Online grammar and spell checker
- Can see corrections as you type or use Ginger Proofreader to scan the entire document for mistakes
- Will read corrections out loud

- Has a mobile Android, iOS and Windows
- Works inside Word and emails
- Text to Speech
 - Read emails and docs
 - Can choose voice and accent
- Ginger Demo



Inspiration

- Mind Mapping software
- Allows User to "connect" ideas together
- Add in pictures and hyperlinks
- Can produce an outline form

- Better organization of essays
- \$27.96
- App \$9.99

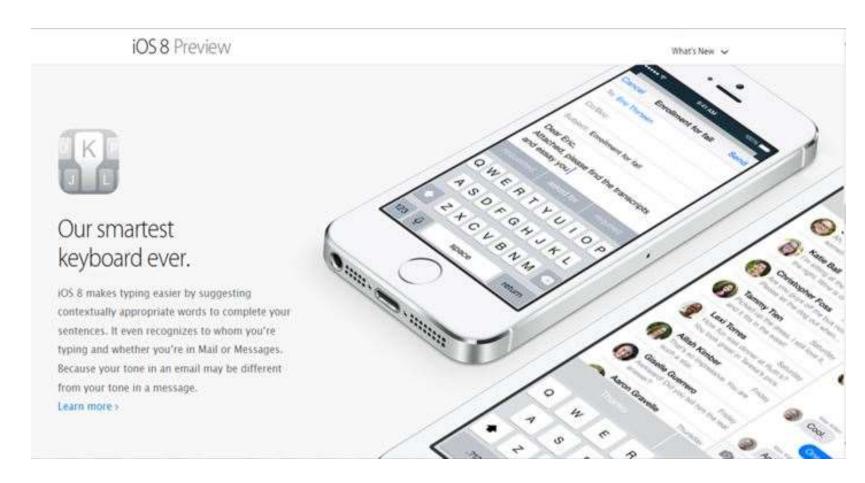




What's New In AT!



Typing made Easier









Reminders



- Built-in App
- Works with VoiceOver
- Organize your reminders
- Siri
- iPad



TapTapSee

- Designed to help people with low vision identify objects they encounter in their daily lives.
- Double tap the screen to take a photo of anything, at any angle, and hear the app speak the identification back to you.
- Requires VoiceOver to be turned on.





Pixie

- Maps all of the digital things in your life
- Place a pixie chip on any device and map will tell you it's precise location
- https://www.getpixie.com/





iBeacon Technology

- Estimote Beacons
 - Wireless sensors that attached to any location or object
 - Broadcasts radio signals to smartphone







Apple Watch

- Receive Calls and texts
 - "Inner Circle"
- Apps
- Can be used for fitness
 - Heart Rate Monitor
 - GPS
 - Accelerometer
- "Hey Siri"
- Haptic feed back
- Calendar
- \$499





FitBit

- Fitness tracker
- Variety of styles and colors
- Track Activity
- Track Food
- Track Sleep
- Track Heart rate
- Works with other Apps
- New Smartwatch







Microsoft Band

- Works across all platforms
- Receives calls and texts
- Uses Cortana
- Keep tracks of steps
- Keeps track of Sleep
- Keeps track of UV
- Keeps track of heart rate
- Choose apps
 - Facebook
- \$199







Moto 360 by Motorola

Runs Android Wear, Google's operating system for

smartwatches.

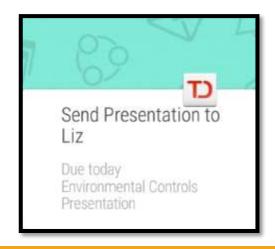






Moto 360 by Motorola

- Classroom Applications:
 - Todoist for Android Wear allows me to quickly view my homework assignments and check them off as I complete them.
 - Evernote for Android Wear allows me to study my notes on the go.







Moto 360 by Motorola

- Transition Applications:
 - Tockle for Android Wear allows me to send preset text messages to my caretaker to let them know that I need assistance.
 - Through applications such as Wink and Hue Control for Android Wear, I can control certain aspects of my smart home appliances from my watch. However, these applications are not full solutions for controlling all of my smart home appliances from my watch.



Mobile Payment Applications



- Looking forward towards my transition to college, I realized that I would need a way to easily pay for things at stores without having to handle physical money or credit cards.
- I began researching mobile payment applications that utilize Near Field Communication (NFC) technology.
- NFC technology allows users to pay for things by simply typing in a PIN number or scanning their fingerprint and holding the back of their phone up to a credit card terminal that accepts NFC.



Mobile Payment Applications

- Examples of these applications include:
 - Google Wallet (for Android, will be replaced by Android Pay soon)
 - Apple Pay (for iPhone 6, iPhone 6 Plus, & Apple Watch)
- Paying with NFC is A LOT more secure than paying with a normal credit card.
- In the future, I hope to see more stores accept NFC as a payment method and to see NFC technology included in more wearable devices.









T. Jacket

- Wearable technology vest
- Provides customizable deep touch pressure
 - Uses adjustable air pressure compression controlled via smartphone app
 - http://www.mytjacket.com/







Amazon Echo



- Speech-controlled speaker system
- Voice recognition further distances
- Timers, news, information
- Invitation only
- \$199, \$99 Prime members









Breathe2Relax

- Portable stress management tool
- Detailed information on the effects of stress on the body
- Instructions and practice exercises to learn the stress management skill called diaphragmatic breathing



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🌃 Assistive Technology Soluti... 🗵

Tools Help



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ASSISTIVE TECHNOLOGY

TFL NETWORK

CALENDAR OF EVENTS





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TFL WIKI

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MEET THE

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LDA ANNUAL CONFERENCE

FEB 19

Disneyland Resort & Hotel in Anaheim, California

INTEGRATING UDL AND AT TO CLOSE

THE ACHIEVEMENT GAP

FEB 25

MAR

Griffin RESA 440 Tilney Avenue, P O Drawer H

Griffin, GA 30224





Center



TFL Wiki



www.gatfl.gatech.edu/tflwiki/index.php?title=Main_Page

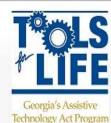


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Page Discussion

Main Page

Welcome to the Tools for Life wiki @. Tools for Life, Georgia's Assistive Technology Act Program, gives more options for greater freedom by increasing access to and acquisition of assistive technology (AT) devices and services for Georgians of all ages and disabilities so they can live, learn, work, and play independently in communities of their choice.

Frequently Asked Questions (FAQs)

- What is Assistive Technology?
- Where can I learn about Assistive Technology devices?
- Where can I access TFL webinar archives?

Recent Presentations and Activities

- 2015 ATIA Orlando January 29-31, 2015 Orlando, FL
- Visiting Nurse Health System, Exploring AT Services in Georgia December 18, 2014 -Atlanta, GA
- 2014 Decoding Dyslexia December 13, 2014 Georgia Tech, Atlanta, GA &
- 2014 SILC and TFL Atlanta Town Hall December 9, 2014 Atlanta, GA №
- 2014 GATE Seminar December 5, 2014 Georgia Tech, Atlanta, GA
- 2014 GSU Rehabilitation Counseling Improving Independence through AT November 12, 2014 - Atlanta, GA
- 2014 LeadingAge Georgia Conference November 6, 2014 Atlanta, GA ₽
- Gwinnett Technical College October 30, 2014 Atlanta, GA №
- 2014 High School High Tech October 23, 2014 Dublin, GA №
- 2014 Georgia College & Career Readiness Institute September 25-26, 2014 Macon, GA @
- LDA Webinar, AT 101 Understanding and Advocating for Assistive Technology -September 18, 2014 - Webinar @

2614 GDA Annual Conference - September 3.5, 2014 - Savannah, GA ≠ I

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- Tools for Life Websiter

Helpful Tools & Resources

- Tools for Life AppFinder ☑
- Dollars & Sense Funding Guide
- gTrade

 Georgia's Online Equipment Exchange

Read View source View history

Tools for Life Community Partners

News

- June 3-6, 2013 Tools for Life co-hosts IDEAS Conference in St. Simons Island, GA r
- April 2013 Tools for Life AppFinder makes program spotlight on AT Connects website
 Ø
- April 2013 Our Favorite Apps spotlight on AT Program News



Visit the LDA AT Solutions Lab



Success with Assistive Technology and Advocacy begins with the Individual

- Explore & USE Assistive Technology that can Help You
- Begin with the End in Mind
- Try Fail & Try again…
- Evaluate and Evolve
- Celebrate your Successes! Success Breeds Success.
- AND Visit Us at the LDA & AMAC AT Solutions Lab in Chicago!



Additional Resources

Family Center on Technology and Disability http://www.fctd.info

WrightsLaw http://www.wrightslaw.com

National Disability Rights Network http://www.napas.org/

A Guide to Disability Rights Law – U.S. Department of Justice http://www.usdoj.gov/crt/ada/cguide.htm

American Association of People with Disabilities http://www.aapd-dc.org/

Consortium for Citizens with Disabilities http://www.c-c-d.org/



Many states have their own Disability Law or Protection and Advocacy Organizations. Links to these sites can be found on the Family Center on Technology and Disability's Website under Member Organizations.



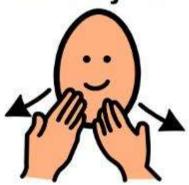


My Question to You: What have You Learned today?





thank you





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Disclaimer



And Maria Kelley!



Disclaimer

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