

2019 Southern Maine Autism Conference: Workshop Presentation Notes

Title: Trends and Innovations in Assistive Technology

Description:

We all wish we could “keep up” with the constant changes in the “everyday” technologies in our lives. Keeping up with the changes and innovations in Assistive Technology (AT) – technology designed or intended for people with disabilities – can be particularly frustrating.

In this session we discuss some of these new trends and new types of AT including “everyday” technologies that can serve as AT. Resources for how to review new technology will also be shared.

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John has expertise in information technology and communications, consulting on the use of technology in psychology and mental health. More recently has owned and operated a web design/development firm specializing in accessible and universally designed digital content.

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Intended Audience: Parents, families, caregivers, case managers.

Welcome - Intro

Goals

- Learn about Maine’s Assistive Technology (AT) Program
- New changes, innovations and trends & “Everyday” tech.
- How to “review” new tech.
- AT for folks living with ASD
- Lots of resources

What are Assistive Technology and Services?

- AT Devices are any item, piece of equipment, or product -- commercial or customized-- that will increase, maintain or improve the functional capabilities of a person with a disability
- AT Services help a person learn about AT options and decide if using AT will benefit them.

Low Tech, Medium Tech and High Tech

Maine CITE

- Maine's State AT Act Program - Created/funded thru Federal AT Act.
- Promotes AT through Information, Education, Technical Assistance, Services.
- Collaborate with many Maine AT providers, organizations, and policy makers.
- Visit our website - mainecite.org - for
 - Webinars/training
 - Apps as AT
 - Funding info
 - AT Providers

Maine CITE Mission

- To improve access & acquisition of AT by people of all ages, all disabilities, in:
 - Education
 - Employment
 - Community Living
 - Information Tech & Telecommunications
- Programs
 - AT Equipment Demonstration/Loan
 - AT Reuse
 - Information about Paying for AT

Trends and Changes

- Move toward integrating features into "everyday" technologies.
- Move toward "personal" technology (i.e., wearable, customizable).
- Move away from AT Devices sold by AT companies and DME vendors.
- "Smaller is better."

Innovations

- Smart Home technology
- Wearable technology
- Artificial Intelligence (AI)
- Autonomous Vehicle Technology

- Virtual Reality (VR) and Augmented Reality (AR)

AT for folks living with ASD...

- Expressive Communications
- Safety
- Social Skills
- Motivation and Behavior Supports
- Independence
- Scheduling/Reminders/Organizing
- Academic Skills
- Transition and Career Development
- Community Living Supports
- Other Stuff

Expressive Communications

- With AAC devices symbols are heavily used. Children with Autism are found to have strong visual processing skills, and low expressive communication. This makes them good candidates for AAC devices.
 - Augmentative & Alternative Communication (AAC)
 - PECs (Picture Exchange Communication System)

AT For Expressive Communication

- GoTalk - attainmentcompany.com/gotalk-9
- AAC Apps – see Apps as AT - mainecite.org/apps-as-assistive-technology-at/
- Big Mack switch - ablenetinc.com/bigmack
- Tobi Dynavox - tobiidynavox.com/en-us/
- Otterbox Cases - otterbox.com/en-us/ipad
- Trident Kraken

Safety

- Wandering/Tracking

AT For Safety

- LG GizmoPal 2 - lg.com/us/cell-phones/lg-VC110-Pink-gizmopal-2
- MyBuddy Tag. - mybuddytag.com/
- Smart Sole - gpsmartsole.com/gpsmartsole/
- Find My Friends (iOS app) - itunes.apple.com/us/app/find-my-friends/id466122094?mt=8
- Tile thetileapp.com/en-us/

Project LifeSaver

- National Program used with local Police, Fire, Rescue

- projectlifesaver.org/
- In Maine:
 - Auburn PD
 - Lewiston PD
 - Brunswick PD
 - Cumberland County Sheriff's Office
 - Scarborough PD
 - Ogunquit PD

Smart Home

- Movable camera/monitor – many makes and models (shown SACAM)
- August Lock with app - august.com/
- SimpliSafe Home Security System - simplisafe.com/
- Amazon Echo
- Google Home
- Facebook Connect
- Intelligent Smoke Alarm - Kidsmart vocal smoke alarm - techlicious.com/shop/kidsmart-vocal-smoke-alarm/

Social Skills Development

- Programs like Aiko & Egor allow children to watch videos with a simple animation that models play skills and social behaviors based on research. Be sure to look for programs based on real research instead of anecdotal evidence.
- seebeneath.org/

Motivation and Behavior

- Rewards
- Modeling appropriate behavior
- Reducing inappropriate behavior
- Self-Control - Calming
 - Fidgety – Stress Ball
 - Weighted Blanket
 - Headphones/Music

AT for Motivation and Behavior

- Teach Town – Social skills services - web.teachtown.com/
- Scene Speak – app that provides a framework to create interactive visual scene displays and social stories. - goodkarmaapplications.com/scene-speak1.html
- Social Stories Creator – Touch Autism - touchautism.com/app/social-stories-creator-library/
- Behavior Tracking Pro – app - behaviortrackerpro.com/

AT for Self-Control and Calming

- Daniel Tiger's Grr-ific Feelings - pbskids.org/apps/daniel-tigers-grr-ific-feelings.html
- Breathe, Think, Do With Sesame - itunes.apple.com/us/app/breathe-think-do-with-sesame/id721853597?mt=8
- Zones of Regulation - zonesofregulation.com/index.html
- Tico Timer - itunes.apple.com/us/app/tico-timer-your-fun-timer-for-children/id792953890?mt=8
- Apps for Independence (MS-Word) – Apps list by Christine Martin, OTR/L – from SMACT Meeting 2/1/2019. - mainecite.org/wp-content/uploads/2019/02/TransitionApps.docx
- 7 Apps to Help Younger Kids With Self-Control - understood.org/en/school-learning/assistive-technology/finding-an-assistive-technology/7-apps-to-help-younger-kids-with-self-control
- 5 fun fidgets for children with special needs - eastersealstech.com/2016/02/10/5-fun-fidgets-for-children-with-special-needs/

Independence

- Decision Making
 - Putting rules in a visual form.
 - Learn alternative behaviors.
- Opportunities to improve self-regulation and self-management skills.
- Opportunities for Repetitive practice.
- Self-advocacy skills
 - Use video recordings:
 - Opportunities to try simulations of social situations.
 - Practice social skills.

AT For Independence

- Microsoft HoloLens – Augmented Reality - microsoft.com/en-us/hololens
- Fraunhofer Institute for Integrated Circuits – s/w that detects emotions – Research only
- [Social Stories Creator](#) (app)

Scheduling/Reminders

- Task Management
- Time Management

AT for Scheduling/Reminders

- Pictello – Task Management - assistiveware.com/products/pictello
- CanPlan – Task Sequencing - canassist.ca/EN/main/programs/technologies-and-devices/at-home/canplan.html
- Any.Do – to do list - any.do/
- See also Apps as AT on Maine CITE mainecite.org/apps-as-assistive-technology-at/

Academic Skills

- Reading
- Writing

AT for Academics

- Please consult with your school staff
- 100+ Best Apps for Autism {and other Learning Disabled Students}
adayinourshoes.com/apps-for-autism

Transition and Career Development

- Work/Job Accommodations

AT for Transition and Career Development

- Assistive Technology for Transition Success – Pacer
- pacer.org/transition/learning-center/assistive-technology/
- [The Path to Independence - Mobile Apps to Support Transition Aged Youth - PDF](#)

Community Living

- Activities of Daily Living (ADL)
- Safety
- Travel

AT for Community Living

- Smart Home Technology → Home Monitoring Services
- Augmentative Communication
- Wearable Technology - apple.com/watch/
- Task Planning apps
- Travel apps/GPS Tracking - amazon.com/goTele-Required-Portable-Off-grid-Tracking/dp/B07DJTN1LS

Other Stuff

- Sensory Aids - Sensory aids refer to any devices and tools which make use of, or which aim to improve sensitivity to, one or more of the senses.
 - Environment alerts and aids (getting too noisy) and feedback (Talk Light/traffic light)
 - Hearing and listening aids (such as noise cancelling headphones) which are designed to help people gain a better sense of, and more control over, their hearing and auditory processing.
- Tactile aids (such as weighted blankets) which are designed to help people gain a better sense of, and more control over, their own tactile sensitivity.

What do we do first?

- Get an AT assessment

- At first diagnosis
- At 3rd year re-evaluation
- Before Transition Planning
- Review annually or more frequently.
- List of providers - mainecite.org/at-consultants-in-maine/

AT Assessment

- Individualized
 - May require multiple sessions
 - May require multiple locations
- Assesses
 - Abilities
 - Challenges
 - Needs
 - preferred learning style
 - the task(s) to be accomplished
 - environment in which the AT will be used.
- Use low tech or medium tech to see if something might work.
- Uses certified professional.
- Provides for trying new AT and training in use.
- Setting up AT may also be included.

Assistive Technology Considerations and Planning

- Be careful not to let AT replace the human touch and companionship.
- Be considerate of the cost of AT. Some of the best solutions are the most simple and inexpensive.
- Assure ethical practices when considering AT.
- Diligent support with blue tooth and Wi-Fi connectivity and assuring technology is working properly is vital to safety and success.
- Schedule practice and testing regularly.

Assistive Technology is Individualized

- Stay person-centered through the AT process.
- We are all unique. Our experiences as we go through life will be our own.
- The individual's history and preferences should always be considered.
- Assistive technology is often trial and error.
- What works for one may not work at all for another.
- Communicate with your AT Services provider when things don't go as planned or additional training is needed.

Acquiring Assistive Technology

Maine CITE - Demo & Loan Providers

- AT Demo & Loan service providers:

- Pine Tree Society
- Spurwink-ALLTECH
- CARES Inc
- UM Farmington – Spenciner Center/Library
- Each has an AT Device Inventory – all link to AT4Maine.org

AT Reuse

AT Reuse at Spurwink-ALLTECH – SpurwinkALLTECH.org

892 Riverside St, Portland. Phone 207-535-2017

AT Service Providers

- **Spurwink / ALLTECH:** Assessment, Demo/Loan, Reuse. SpurwinkALLTECH.org
- **Bureau of Rehabilitation:** Independent Living (IL), Education & Employment. maine.gov/rehab/
- **Alpha One:** AT/IL Assessment, Driving Evals, IL Grant. alphaonenow.org
- **Iris Network:** AT for visual impairments. theiris.org
- **Mainely Access:** AT Assessment for visual impairments. mainelyaccess.com
- **Maine AgrAbility:** AT for Farming, logging and aquaculture. umaine.edu/agrability
- **Disability Rights Maine:** Telecommunications Equipment & AT for Deaf/Blind. drme.org
- **Pine Tree Society:** AT for Communication. pinetreesociety.org
- **C.A.R.E.S. Inc.:** AT Demo & Loan. caresinc.org
- **mPower Loan Program:** Flexible loans to buy AT. mpowerloans.org
- **Maine Center for Integrated Rehab:** AT Assessment & OT Services.
- **Maine Assistive Technology Solutions:** AT Assessment & Consulting.
- **Gallant Therapy Services:** OT Services. gallanttherapyservices.com
- **AT Practitioners: ATP Certified by RESNA.** See info resna.org/certification
- Occupational Therapists
- Physical Therapists
- Speech Therapists
- Local Durable Medical Equipment (DME) vendors and manufacturers

Where to Find AT

- Amazon.com
- Smarthome.com
- Abledata.com
- DME Stores
- Enabelingdevices.com
- Rehabmart.com
- Disability Rights Maine: Telecommunications Program

Paying for AT

- **Maine CITE Funding Page mainecite.org/paying-for-at**

- **Maine's Flexible Loans/Financing:** [mPower Loans - mpowerloans.org](http://mPowerLoans.com)
- **Maine's Home and Community Based Waiver Programs** – mainecite.org/wp-content/uploads/2017/09/ATWaiverComparisonChart-9-2017.pdf
- **AlphaOne** - Independent Living alphaonenow.org

Additional Resources

Please visit mainecite.org/autism

Thank you!

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mainecite.org

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