Navigating The world of Assistive Technology (AT)

Devices, Support and Services

Presentation Outline:

1. Overview of the Utah Center for Assistive Technology (UCAT)
2. Overview of the Utah Assistive Technology Teams (UATT)
3. Other resources for Assistive Technology across the state
4. Important areas to discuss.
5. Show and tell
Kent Remund M.S, ATP, CRC

- OPTIONS for Independence
  - AT Specialist 1997 - 2001
- Utah Center for Assistive Technology
  - Shop guy/AT specialist 2001 - 2008
- Utah Center for Assistive Technology
  - UCAT Director/AT Specialist 2008 - 2014
- Utah Center for Assistive Technology
  - UATT Project Director/AT Specialist 2014 - 2020
- Utah Center for Assistive Technology
  - UCAT Director/AT Specialist 2020 - Present

Assistive Technology…
What Is It, Exactly?

- AT has two parts
  - AT Devices
    and
  - AT Services
- Let’s define them……
Boring Definition

An AT device is any item, piece of equipment or product system, whether acquired commercially off-the-shelf, modified, or custom-made that is used to increase, maintain, or improve functional capabilities of individuals with disabilities. i.e.,

“Stuff”

Tech Act Amendments of 1994

Types of Assistive Technology

• Level of technology
  – High
  – Medium
  – Low

Rule of Thumb
Cost follows level of technology
Other Boring Definition

An AT service is any service that directly assists an individual with a disability [or family member or caregiver] in the selection, acquisition, or use of an AT device.

a.k.a.

“Help with Stuff”

Tech Act Amendments of 1994

Key Point

• Often people only think of the device forgetting the professional services needed to assure best match of device and requirements.
• Result is waste of resources with abandonment of AT devices.
• 30% of all AT is not used. (JAN 2007)
What is UCAT?

- Central “Hub” of Utah’s AT Program
  - Demo/loan bank
  - Hands-on computer center
  - Heavy-duty shop
  - Eight assessment experts
Students with disabilities sometimes need and are entitled to special equipment and services to ensure that they have access to a free and appropriate public education (FAPE).

On a case-by-case basis, the use of school-purchased assistive technology devices in a child’s home or in other settings is required if the child’s IEP Team determines that the child needs access to those devices in order to receive FAPE.

IDEA Sec. 300.105
Utah Assistive Technology Teams

30 Teams serve students throughout Utah

Utah Assistive Technology Teams

“In order to support the inclusion and participation of students with disabilities in regular education classrooms, all IEPs developed for children identified as needing special education services, must indicate that AT has been considered to “provide meaningful access to the general curriculum.” (IDEA, 1997).
IEP Consideration

IDEA legislation mandates consideration of assistive technology on an Individualized Education Plan to support a child’s participation in his/her least restrictive learning environment.

Dyslexia is the most common learning disability. However, not all reading difficulties are linked to dyslexia. Some see dyslexia as a distinct form of reading difficulty from other causes, such as a non-noceraugol deficieney with vision or hearing, or poor or ldutaaeene riendg ilbcuentin. Terhe are terhe preseopod cimvntgoe stbuayps of dyisla (auridtoy, vauus and anntliaetol), ahltguvh idnaiuudi cesas of dxsylea are btet erxplead by siiepfcc uny/ending neoropsucialgial citilces and co-curranding lanerag dleitbalisis (e.g., aintneen-defcilt/havceropyity diodreer, math dstrailit, etc.). Algtouh it is crnsedcde to be a vtpatie lguuaene-baed liinreaag datsisity in the mcseaeh liitrarue, dxsylea aslo actafs one’s enoexssaa laggnaus skilss. Rhacreracse at MIT fnoud tahn peolpe with deliyxs eaxhtleodb voie-rioleotngcn aieltis.
## Assistive Technology Resources Across Utah

**Utah Center for Assistive Technology** *(Vocational Rehabilitation)*

**Utah Assistive Technology Teams**

**Utah Independent Living Centers**

**Division of Services for People with Disabilities**

**Utah Assistive Technology Program** *(Logan, Uinta Basin)*

- **Refurbished mobility devices** — Customized devices — Small grants — Low interest loans

### AT Consideration

<table>
<thead>
<tr>
<th>AREA – Academics:</th>
<th>Need AT?</th>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>Reading:</td>
<td></td>
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<tr>
<td>Written Expression:</td>
<td>Graphic organizer; word processor with spell checker; word predictions; electronic spell checker/dictionary; adapted paper; alternative writing utensils (including grips); talking word processor; plant board; prewritten words/phrases on cards or pocket charts; voice recognition software</td>
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<tr>
<td>Math:</td>
<td></td>
<td></td>
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<tr>
<td>Executive Functions, Learning/Study:</td>
<td>Print/picture schedule; aids to find materials (color coding, ...); electronic organizer; educational software; highlighting text; pages/electronic reminders; duplicate books; smart pen</td>
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</tbody>
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<table>
<thead>
<tr>
<th>AREA – Sensory:</th>
<th>Need AT?</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Hearing:</td>
<td></td>
<td></td>
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<tr>
<td>Vision:</td>
<td>Magnifier, screen magnifier, screen color contrast, braile materials, braile translation, enlarged or braile labels for keyboard, enlarged materials, alternate color text/background, talking word processor, large cursor, enlarged books</td>
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<tr>
<td>Tactile/Movement:</td>
<td>Weighted vest, blanket, etc.; movement cushion, specialized seating, fidget toys, chew toys</td>
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**Consult Occupational Therapist to ensure safe implementation**

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<thead>
<tr>
<th>AREA – Communication:</th>
<th>Need AT?</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Expressive/Receptive/Functional:</td>
<td>Communication board with pictures/words/letters/objects; eye gaze frame; voice output device; scanning board; repetitive predictable books</td>
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</tbody>
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<table>
<thead>
<tr>
<th>AREA – Physical Access:</th>
<th>Need AT?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Control:</td>
<td>Apartment controls; battery operated toys/learning aids; key guard; alternative keyboard; word prediction; track ball/joy stick/head mouse; switch scanning; on screen keyboard; adaptive switches; adapted eating/drinking hygiene tools; alternative access software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positioning/Mobility/Seating:</td>
<td>Non-slip surface on chair; cushions; footrest; adapted or alternate chair; custom seating system; stander; positioning aids; hand/arm support; lap tray; walker; grab bars/trails; wheel chair; crutches; parallel bars</td>
<td></td>
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<thead>
<tr>
<th>AREA – Computer Access:</th>
<th>Need AT?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Access:</td>
<td>Touch screen; adapted mouse, joystick, trackball; key guard; head mouse; switch/switch adapter; switch with scanning; on screen keyboard; text to speech; word prediction; on screen keyboard; alternative keyboard; speech recognition; touch pad; eye gaze</td>
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Adapted from Payson Unified School District #10
UCAT Continued

• Evaluation of needs
• Help with device selection
• Custom device fabrication or mod
• Trial of various PC access devices
• Home- and jobsite assessments
• Trial loan of devices
• Assess voice-input aptitude
• Funding advice

Demo/Loan Bank

• Library of devices a client can check out for a trial at home
• Assessment process narrows the choices to the one that seems best
• Client tries it at home for up to a month
• Once success is demonstrated, we can recommend purchase with confidence
What Can AT Do?

- Restore functional capabilities
- Mitigate the impact of a disability
- Increase independence
- Enhance the education process
- Aid an individual to become more employable or possibility of advancement.

What does “AT” look like?

- AT can be sorted into 7 general types
  - based on the primary function
- These aren’t chiseled in stone
  - Some may fit into more than one
- Let’s look at the categories
Types of Technology

- Augmentative alternative communication (AAC) devices
- Aids to daily living
- Electronic aids to daily living (EADL)
- Alternative PC access devices
- Seating and positioning aids
- Ramps and lifts
- Mobility aids

Let’s look briefly at each of them

AAC Devices

- Allow non-verbal people to communicate
- Low to high tech solutions
Aids to Daily Living

- Help with many basic tasks
  - Pen and pencil holders
  - Bent-handled eating utensils
  - High-backed plates
  - Sock-donning aids
  - Reachers and grabbers
  - Memory aids (PDA, Cell phones)

Electronic Aids to Daily Living

- Turn on and off lights
- Control the environment
- Temperature
- Phone calls

- Alexa/Google Home/ Siri
Alternative Computer/Tablet Access

• Various non-traditional ways to access a device
  – Trackball
  – Glide pad
  – Joystick
  – Single- & dual-switch scanning
  – On-screen keyboard
  – Voice-input technology
  – Alternative mounting of controls

Seating and Positioning Aids

• Various ways to ensure posture is the best it can be
  – Specialized cushions
  – Customized head supports
  – Customized torso supports
  – Transfer benches
Ramps and Lifts

- Essentially, these are ways for people with mobility impairments to move to different levels in a building
  - Stair glide
  - Platform lift
  - Porch lift
  - Ceiling lift
  - Entry ramp

Mobility Aids

- Canes
  - conventional
  - four-footed
- Walkers
  - No-wheeled
  - 2-wheeled
  - 4-wheeled
- Wheelchairs
  - manual
  - Powered
Universal Design for Learning

• Read&Write for Google
• Microsoft word
• Google Docs – “Tools” tab > Voice typing
• Grammarly – Chrome extension
• PC computers/ Apple Computers
• Cell phones and tablets
Transitioning Into Adulthood

- Utah Board of Education
- Utah Parent Center
- Vocational Rehabilitation
- Division of Services for People with Disabilities
- Many others
Adaptive Bike Trailer
How to Refer Someone to Us

https://jobs.utah.gov/usror/vr/services/ucat.html

Utah Center for Assistive Technology (UCAT)

The Utah Center for Assistive Technology (UCAT) is a statewide resource offering information and technical services to help people with disabilities acquire and use assistive technology devices. UCAT offers free evaluations to anyone within the state of Utah.

Free Consultation / Referral Form

If you are seeking a free consultation with UCAT, please fill out a referral form and email it to utcat@utah.gov.

Who We Serve

Our services are available to people with disabilities, parents, and other family caregivers, rehabilitation counselors, independent living specialists, special educators, occupational therapists, physical therapists, allied medical professionals, and those who are concerned with or advocate for people with disabilities.

Customized Devices

Sometimes, a commercially available assistive device is not quite right to fit a specialist need or to fit the person with a disability. UCAT has a well-equipped workshop and skilled staff who can modify the device to meet the need. We also have the tools and expertise to design and fabricate new solutions to fill unmet needs. Our Assistive Technology Specialists can help you in the following ways:

- Design, build, and fabricate custom devices.
- Modify devices to better meet a need.
- Help define assistive and positioning needs to ensure maximum functionality of a seating system.

IV. Other Information That Could Be Helpful to the AT Assessment Process:

A. Name: ____________________________
   Email: ____________________________
   Phone: ____________________________
   Address: __________________________
   City: ____________________________
   State: ____________________________
   Zip Code: ____________________________

B. Description of Problem: ____________________________

C. Additional Information: ____________________________

D. Referral Source: ____________________________

E. Special Needs: ____________________________

F. Other Information: ____________________________

G. Attending School: ____________________________
   Grade: ____________________________
   Type of School: ____________________________

H. Other Information: ____________________________

IX. Signature: ____________________________

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Questions?

If you think of something later, call or write:
801.887.9531 or kremund@utah.gov