

The Right Tools for the Job: A Bold New World of Assistive Technology

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Assistive Technology (AT) Defined:

AT Device:

- Any item, piece of equipment or product system whether acquired commercially off the shelf, modified or customized that is used to **increase or improve functional capacities** of individuals with disabilities.



AT Service:

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



The ADA and AT

Assistive Technology is not specially mentioned in the ADA, but historically has been considered as a “**Reasonable Accommodation**”

- A reasonable accommodation is any modification or adjustment to a job or the work environment that will enable an applicant or employee with a disability to participate in the application process or to perform essential job functions.

Employee must self disclose need for reasonable accommodations including AT

Questions to ask when considering AT in the workplace

- How does my disability affect my job performance?
- What specific job tasks are affected?
- What is the physical environment – potential problems?
- What accommodations or strategies are available to reduce or eliminate these problems?
- Have my employer and I worked together regarding possible accommodations?
- Can I try the AT before it is purchased?
- Will training be needed?

Questions about the AT

- Will it help me do what I need to do?
- Is it easy to use and set up? Will I need to be trained to operate the device?
- Will anyone else need to be trained?
- Is it dependable?
- Will it work with other technologies I use?
- Is there convenient technical support available?
- Is the device physically comfortable?
- Is the device affordable to purchase and maintain?
- Is the appearance acceptable in the workplace?

Who pays for the AT?

Possible Funding Sources

- **Employer – under the ADA as a reasonable accommodation**
- **Vocational Rehabilitation as part of an Individual Plan for Employment (IPE)**
- Federal Government Agencies (DOD-CAP)
- PASS Plan through Social Security
- Division of Developmental Disabilities
- Health insurance – Private, AHCCCS/ALTCS (limited)
- The person who needs it – personal resources

Disabilities and Functional Limitations

- Cognition/Learning/Behavior
- Hearing
- Vision
- Mobility
- Strength/Coordination/Chronic Health Issues

Cognitive Problems Make It Difficult To:

- Remember – especially more recent information
- Follow multiple instructions
- Concentrate
 - Start or finish things on time
- Make decisions
- Exercise good judgement – be safe
- Read, use, or understand complex words and language
- Do math

Cognitive & Memory Aids

Low tech → High tech

- Remember appointments, tasks, contact info
- Task sequencing
- Stress reducers
- Software and apps for smart devices
 - “There’s an App for That”:
<http://www.waisman.wisc.edu/~rowley/apps/AllApps.pdf>
- Text to Speech Voice Recognition
- Word prediction software



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First Then Visual Schedule

Good Karma Applications Education Education ★★★★★ 4.0

Everyone

Add to Wishlist \$4.99 Buy

Schedules

- ABA Schedule
- Morning Routine
- How to make a sandwich
- Brush teeth
- Get dressed

Morning Routine

First



↓

Then



Morning Routine

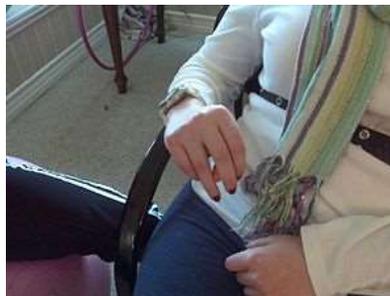
- go potty
- wash hands
- take a shower
- Get dressed
- Brush Teeth

First-Then visual schedule is an affordable user-friendly mobile application designed for caregivers to provide positive behavior support through the use of “visual schedules”. First-Then was designed for individuals with Autism, communication needs, developmental delays, Down’s Syndrome, Alzheimer’s

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Fine & Gross Motor Limitations

- Weakness
- Muscle spasticity
- Incoordination
- Shaking/tremors
- Loss of sitting or standing balance
- Difficulty or unable to walk



AT for Motor Limitations

- Ergonomic office equipment: copyholders, monitor risers, keyboard trays, keyboard rests, foot rests
- Speech recognition software
- Accessibility options built into PC, IOS and Android systems
- Use multi-purpose carts to move, carry, or transfer items in the workplace.
- Small material handling devices may help you with lifting and carrying items
- Canes, crutches, walkers, scooters help with balance & fatigue (Consult a therapist)

Hearing Impairments

- Deaf
- Hard of Hearing
- NOT THE SAME



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Deaf/HOH Communication Options

- Handwritten notes
- Typed notes
- Text Messages
- Instant Messaging
- Email
- Communication Access
Realtime Translation(CART)
- Sign language / interpreters
- Electronic
- Captions
- Relay Services
- Video Interpreting
- Video Relay

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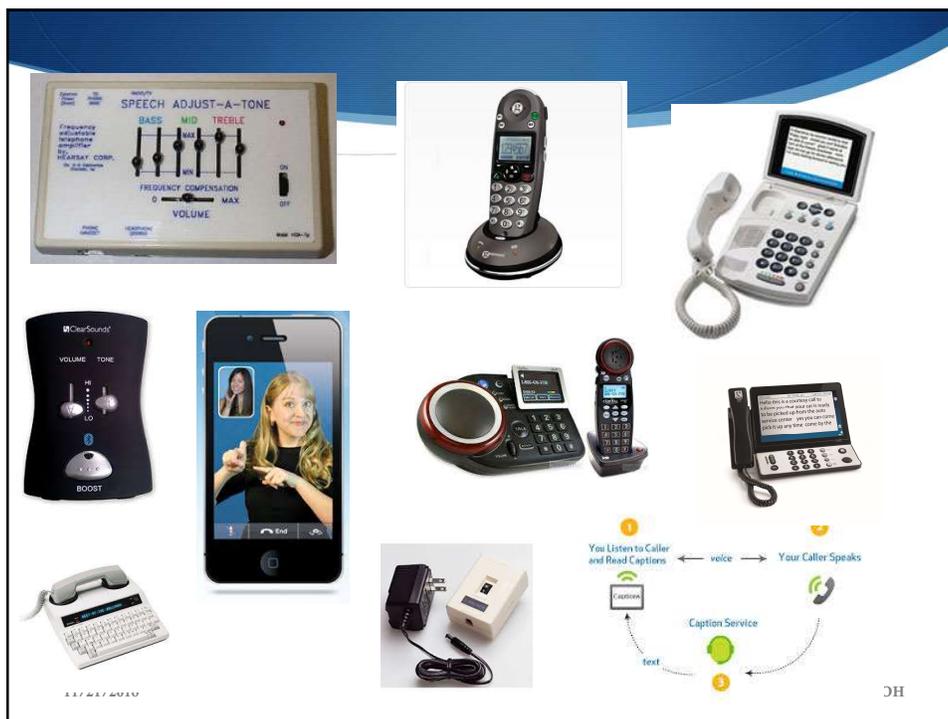
ASSISTIVE LISTENING DEVICES

- Personal Amplifiers (Pocket Talkers, Bean, etc.)
- Personal FM Systems
- Loop Systems
- Ear buds
- Headphones
- Ear pieces
- Neckloops



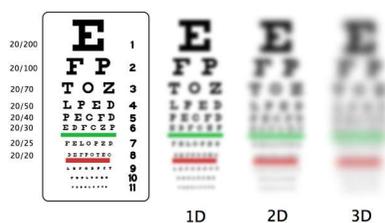
Assisted Listening Devices





Vision Loss

- Dimmed, blurred, or double vision
- Light sensitivity
- Low vision
- Low vision
- Blind



Vision Loss

Accommodations

- Request work-related materials as audio files, large print or Braille.
- Frequent breaks to give eyes a rest
- Aide or reader for reading printed material, transcribing notes, filling out forms, etc.

Assistive Technology

- Hand-held Magnifiers
- Video Magnifiers – near and far
- Screen magnification software
- Large high-resolution monitor
- Screen reading software
- Refreshable Braille Displays
- Braille Notetakers
- Wayfinding devices for personal navigation



Difficulty with Daily Living Activities

- Walking, bathing, dressing, grooming, eating, using the restroom, etc.
- Difficulty with these activities can affect your ability to get ready for work and manage breaks during the work day.



Daily Living

Accommodations

- Work with your employer to arrange easy access to the restroom and kitchen areas.
- Personal assistant at work to help with eating lunch and using the restroom.
- The assistant can also help with job-related tasks as appropriate.

Assistive Technology

- Adapted eating utensils
- Non-slip mats for plates and bowls,
- Straws, and cups with adapted lids and handles can aid with eating and drinking.
- Adaptive clothing
- Small dressing aids such as button hooks, zipper pulls, sock aids, elastic shoelaces, etc.

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Speech Impairments

- Weakness in muscles in the tongue, lips, cheeks, and mouth
- Slurring, mispronunciation
- long pauses in speech
- No speech



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Speech Impairments

Accommodations

- Communicate through email or text messages.
- Ask co-workers to be patient and to listen carefully as you speak.
- 711 telephone relay system
- Personal assistant as a "Revoicer"

Assistive Technology

- Picture and/or word boards/books
- Augmentative and alternative communication (AAC) devices to generate speech:
 - dedicated tablet size devices
 - computer programs for your own computer
 - apps for your mobile device



AT for Speech

Low Tech



High Tech



Chronic Health Conditions

- Weakness & Fatigue
- Limited exertion & endurance
- Difficulty maintaining prolonged or repeated activities.



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Chronic Health Conditions

Accommodations (with employer's consent)

- Schedule periodic rest breaks
- Telework options
- Negotiate Flexible work schedule
- Relocate your workstation closer to the restrooms, meeting rooms, parking lot, etc.
- teleconference options for meeting attendance.

Assistive Technology

- Walker, or cane with seat
- Scooters
- Stand/lean stools
- Anti-fatigue matting
- **Apps** to track symptoms, identify activity patterns, manage fatigue by scheduling tasks & breaks
- Keywords for apps: "fatigue," "health," & "symptoms"

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Resources

- Job Accommodation Network - <http://askjan.org/>
- Pacific ADA Center 1-800-949-4232;
<http://www.adapacific.org/>
- Abledata: <http://abledata.com/>
- Phoenix ADA Office: Peter Fischer; 602-534-9276/Voice
<https://www.phoenix.gov/eod/services/disabilitiesact>
- AzTAP.....



The Arizona Technology Access Program



- AzTAP is a statewide, Phoenix-based program of the *Institute for Human Development* at Northern Arizona University
- Began operating in 1994
- Funded under the Assistive Technology Act of 1998
- US Department of Health and Human Services – Administration on Community Living
- Most services provided at no cost



AzTAP = Statewide Resource for Assistive Technology in Arizona



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AzTAP Services:

- * AT devices
- * **Information & Assistance**
- * **Demonstrate** Consultations to help individuals find the right technology for their needs
- * **Lend out** devices for short term use
- * Operate **on-line equipment re-use** programs
- * Provide affordable **financial loan\$** to help people buy technology
- * **Training, education & technical assistance** to individuals, organizations, agencies and businesses

AzTAP Mission:

- To connect people with disabilities with the **assistive technology** they need to participate as fully as possible in activities that matter



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Information and Assistance

AzTAP's knowledgeable and friendly staff can answer questions and provide assistive technology resources by phone and email as a starting point.



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AT Demonstrations & Consultations

Demonstrations

- Guided, face to face, hands-on exploration of devices & features
- Assists consumer in the decision making process

Consultations

- Individualized, in-depth, sessions with an assistive technology specialist at our center or at client's location (home, office, school)



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Short Term Device Loans

Loans help people decide whether the equipment is right for them – prior to purchase

- All devices are listed on our website.
- Devices are loaned to borrowers for 2 weeks.
- Items are available for pickup or are shipped at no cost to the borrower.



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Assistive Technology Reuse

- AT Equipment Exchange www.AzTAP.org
- DME Reuse Coalition
- Open-Ended, Long Term Device Loans
- Low Cost, Refurbished Computers

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A Statewide, Phoenix-based program of the
Institute for Human Development at
NORTHERN ARIZONA UNIVERSITY

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Training and Education

Training events at OUR office

Training in the community



We do webinars too! Learn at home or in your office



AzTAP Has a Financial Loan Program

Arizona Loan\$ for Assistive Technology



- Loans from \$500 - \$20,000
- Low interest rates
- No prepayment penalties
- Flexible repayment terms (1 – 5 years)
- Assistance completing application
- Identification of other \$\$ sources
- Guidance with device & vendor selection

Criteria: Demonstrate ability to repay loan:

- Sufficient monthly income
- credit worthiness



Independence is priceless; we make it affordable



AzTAP Contact Information

- **Call:** 602-728-9534; 800-477-9921
- **Visits by appointment:** 300 W. Clarendon Ave, Suite 475, Phoenix, AZ 85013
- **Email:** askAzTAP@nau.edu
- **View our website:** <http://aztap.org> or scan our QR code

