

Assistive Technology: What It Is And Why It Matters

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Alt+Shift



Assistive Technology: What It Is And Why It Matters



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Alt+Shift is an *Individuals with Disabilities Education Act* (IDEA) Grant Funded Initiative through the Michigan Department of Education, Office of Special Education



Please Note

In this webinar, Alt+Shift will provide information and resources regarding assistive technology best practices. Student specific solutions, including the use of specific tools, are determined by your learner's IEP team.

For assistance navigating IEP meetings, contact Michigan Alliance for Families.

For assistance with disagreement resolution or complex meetings, contact [Special Education Mediation Services](https://www.mikids1st.org/) (<https://www.mikids1st.org/>).

Accessibility Commitments

We have taken steps to ensure this deck is accessible.

- We used a tool(s) to perform an automated check (Grackle Slides and/or Microsoft Office accessibility checker).
- We also checked manually to ensure a clear reading order for screen reader users.
- We provided access to the deck for you. This means you can personalize your experience as we speak.
- We welcome any feedback for improving the experience.



Nice to Meet You!

Kelsey Brewer

- Assistive Technology and Augmentative and Alternative Communication Specialist with Alt+Shift
- Early Childhood Special Education Teacher 9 years
- Adjunct Professor in Special Education at a Michigan University



We collaborate with educators and families to improve educational outcomes for every learner by rethinking what is possible.



Disclaimer of Endorsement

The inclusion of references to particular items is not intended to reflect their importance, nor is it intended to endorse any views expressed, or products or services offered.

Learner Outcomes

- Help you understand what assistive technology is and how to determine if your child needs it
- Provide examples of tools and strategies for children of different ages, from no-tech to high-tech, and how they can be used in everyday life
- Share free and low-cost AT resources available to Michigan families through schools, lending libraries, and statewide programs

What is Assistive Technology (AT)?

- Any **item, piece of equipment, or product system**, whether acquired commercially off the shelf, modified, or customized that is used to *increase, maintain, or improve* functional capabilities of a person with a disability.
- Any **service** that directly assists the person with a disability in the *selection, acquisition, or use* of an assistive technology device.

What is Assistive Technology (AT)?

- A **tool or strategy** that supports people of any age with a disability in doing things they would not otherwise be able to do

AND

- Any **service** that can help those people select, access, and use that tool or strategy

Who Receives AT Tools and Services?

Any learner who is eligible for special education or Section 504 accommodations, may receive AT tools and/or services if necessary including those with IFSPs.

**“For people without disabilities,
technology makes things easier. For
people with disabilities, technology
makes things possible.”**

--IBM Training Manual, 1991

An Introduction to AT

[youtube.com/watch?v=bFheTcqRtdY](https://www.youtube.com/watch?v=bFheTcqRtdY)



**What, if anything, surprised
you about AT after viewing this
video?**



AT Tools, Strategies, and Services

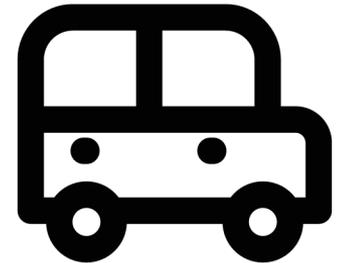


AT Tools

Things that are specifically designed to be used as AT “off the shelf”



Things that are changed or repurposed to be used as AT



The Range AT Tools

No-Tech

Mid-Tech

High-Tech



AT Strategies

Strategies can include modifications or accommodations

AT Strategies Example (1)

modified print

modified print

modified print

modified print

AT Strategies Example (2)



Modeling

AT Strategies Example (3)

Peer support



AT Strategies Example (4)

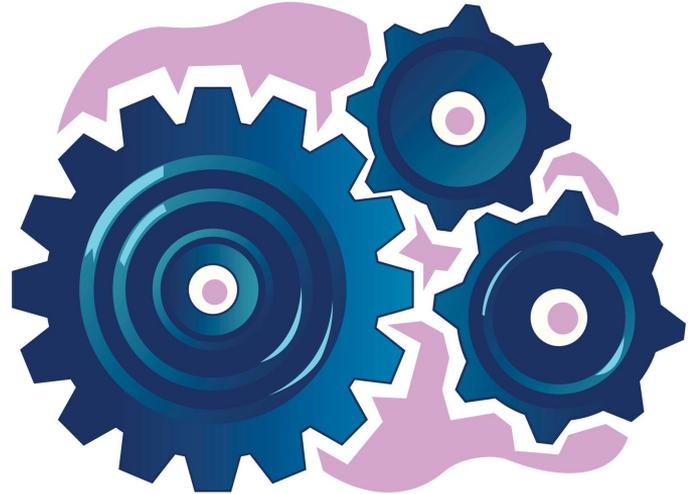
Teaching movements for communication



AT Services

Supports that help with:

- choosing,
- designing,
- fitting,
- customizing,
- adapting,
- applying,
- maintaining,
- replacing,
- and repairing AT



AT Services Example (1)

Training for:

- student
- family
- educators



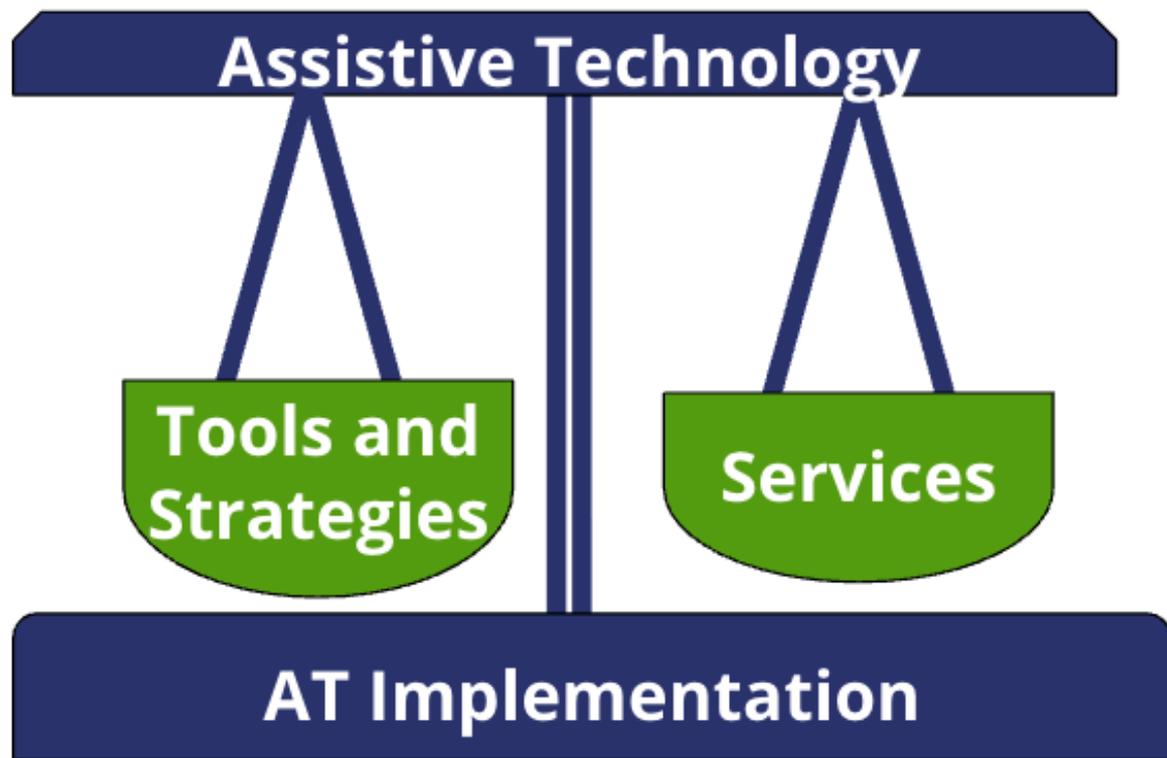
AT Services Example (2)

Selecting and
customizing AT



Tools and Strategies vs. Services:

All are equally
important



AT Trifecta



Tools

Services

Strategies

Consider AT

but first...

Consider Me.



**Myth #10:
AT devices and services should
only be considered for children
with certain
disabilities.**



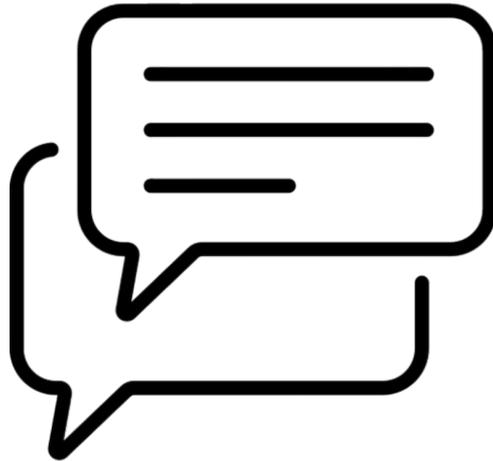
<https://sites.ed.gov/idea/idea-files/at-guidance/>

Fact: How AT Can Help Your Child

- meaningfully participate in the general curriculum AND
- participate in academic, social, or functional activities AND
- communicate AND
- hear and/or see AND
- access print materials AND
- navigate the school environment AND
- organization AND
- written communication and/or computer access AND
- participate in state and local assessments

Please note: This is not an exhaustive list

In what ways has AT helped your child, or, in what ways do you think it could?



**Myth #23:
Infants, toddlers, and their
families do not benefit from AT
devices and services.**



<https://sites.ed.gov/idea/idea-files/at-guidance/>

Fact:

No person is too anything to use AT.

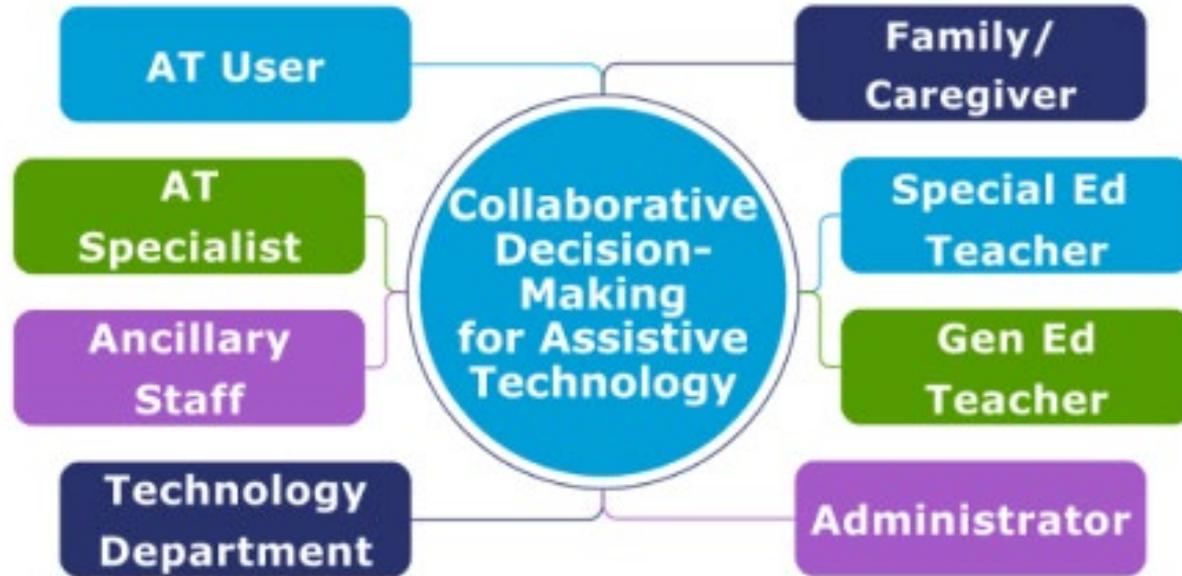


**Myth #21:
Only staff who specialize in AT can
deploy AT devices or provide AT
services.**



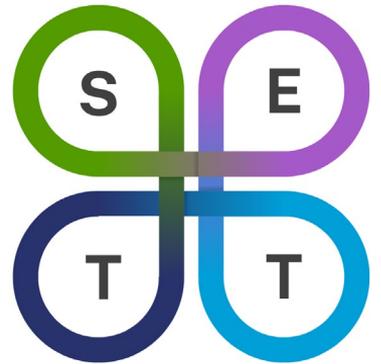
<https://sites.ed.gov/idea/idea-files/at-guidance/>

Fact: AT is a collaborative approach.



The SETT Framework

The SETT framework, developed by Joy Zabala, is a tool to organize information and data around the particular student in a way that helps IEP teams better understand a learner's strengths, needs, and potential AT tools and/or services that may successfully address identified needs.



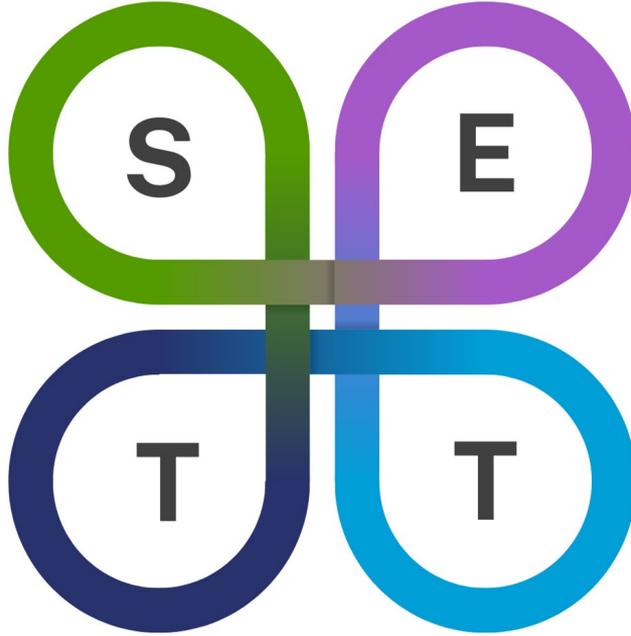
The SETT Framework, cont.

Student:

strengths, current performance and needs

Tasks:

tasks for learning the student will perform



Environment:

current learning environment(s)

Tools:

current or potential tools that may benefit the student

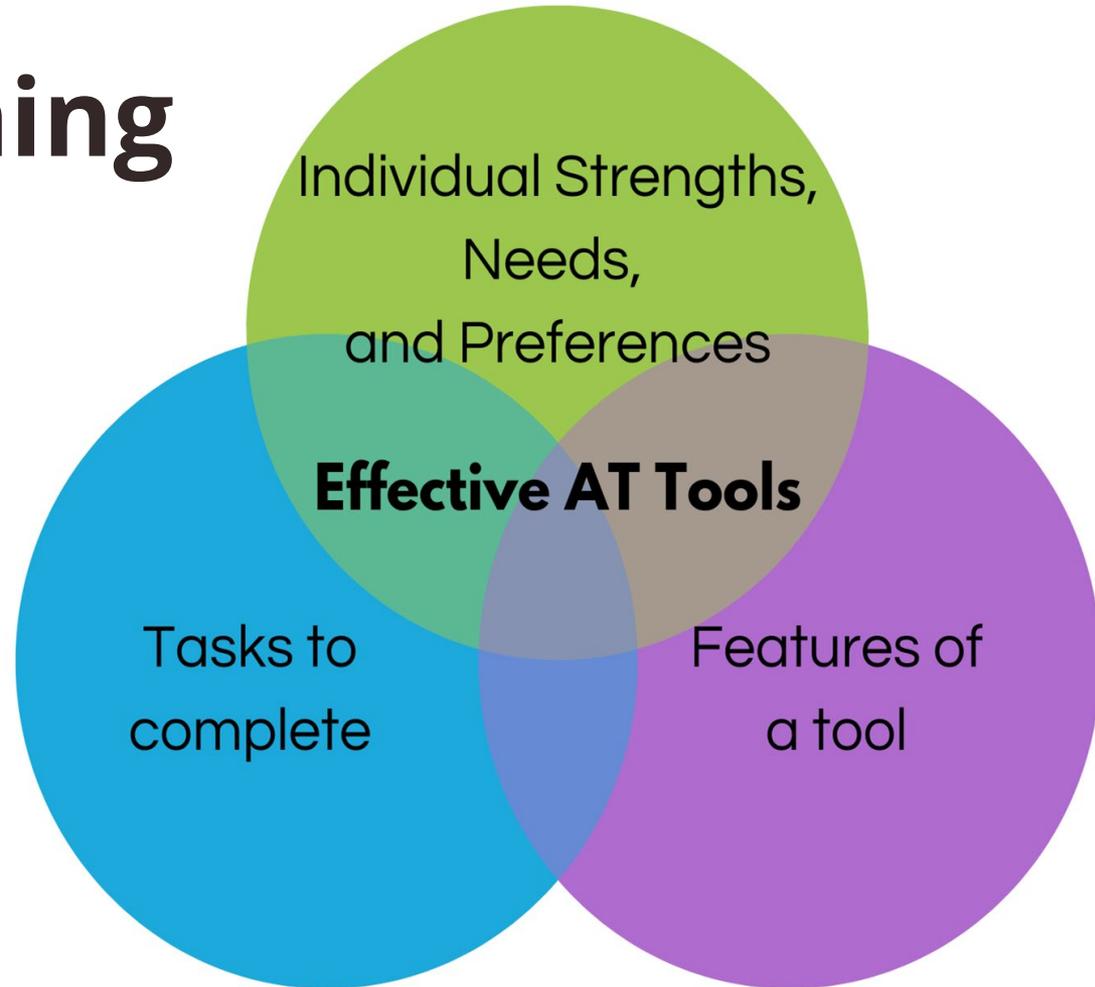
Potential Perspectives in the SETT

- Student
- **Family/caregiver(s)**
- Friend/classmate(s)
- Classroom teacher(s)
- Paraprofessionals/Instructional Assistant(s)
- Related Service Provider(s)
- Technology personnel
- Administrator(s)

Feature Matching

Feature matching is “the formal and informal process in which the attributes of AT that are needed and desired are determined.”

(Fonner & Behnke, 2018).



Feature Matching is: (1)

matching child's needs to a tool/strategy



SHOES



Feature Matching is: (2)

matching child's needs to a tool/strategy



Feature Matching is not: (1)

matching a tool to a child's needs

SHOES



Feature Matching is not: (2)

matching a tool to a child's needs

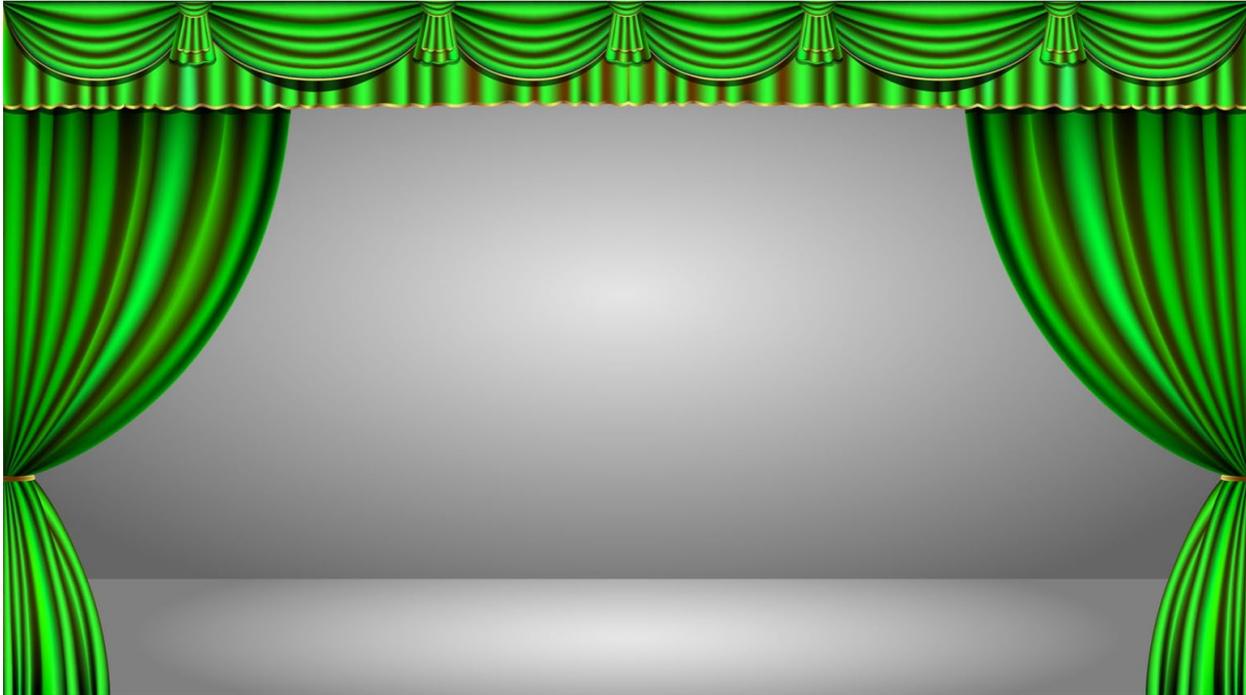


In what ways has *AT* helped your child, or,
in what ways do you think it could?

**What feature(s) does that tool
have that your child requires?**



AT Tools!



Remember AT supports a variety of areas.

Gross Motor
Communication
Fine Motor
Independent
Living
Computer Access
Literacy
Sensory

Daily Routines
Social Skills
Behavior
Extra-Curriculars
Seating
Positioning
Vision
Post-Secondary
Education

Hearing
Academics
Feeding
Self-Care
Executive
Functioning
Employability
Socialization
Rec and Leisure

Tool Exploration Time

1. Choose an area relevant to your child's needs (next slide)
2. Explore the tools in that section
3. Repeat for other areas of need
4. Be ready to share your discoveries



Areas of Need

Communication

Reading and Writing

Math

Executive Functioning

Vision

Hearing

Seating, Mobility,
Positioning

Recreation and Leisure

Socialization

Daily Living

Independent Living

Post-Secondary Education

Employability

Employers and Colleagues

Who Can Benefit from AT to Support Communication

(Augmentative and Alternative Communication - AAC)

Learners who have difficulty being understood by others or understanding what others are saying to them.

Core Vocabulary Board



Single Message Communication



Multi-Level Speech Generating Device



Communication Apps on a Tablet



Non Electronic

Communication Books



Sequential Message Communication



Simple Speech Generating Device



Dedicated Speech Generating Device



Electronic

Examples of AT to Support Reading and Writing

- Text-to-Speech (TTS)
- Audiobooks and digital TTS books
- Optical character recognition
- Handwriting tools
- Keyboards and touchscreens
- Speech to Text (Dictation)
- Word prediction
- Spell or grammar check
- Graphic organizers
- Dictionary



Examples of AT to Support Math Instruction

- Calculators
- Graph or lined paper
- Manipulatives
- Drawing tools
- Graphing tools
- Equation-solving tools



Who Can Benefit From AT to Support Executive Functioning

Learners who have difficulty with activities such as:

- Planning
- Organizing
- Strategizing
- Paying attention
- Remembering details
- Managing time and space

Examples of AT to Support Executive Functioning

- Calendars or planners
- Visual schedules
- Graphic organizers
- Alarms, timers, watches
- Digital recorders, Livescribe pens
- Features of Built-in iOs apps that support Executive Functioning



Who Can Benefit From AT to Support Vision and Hearing

Learners who are Blind or Visually Impaired (BVI) and/or Deaf or Hard of Hearing (DHH).

Examples of AT to Support Vision

- Glasses
- Large print books
- Screen readers and magnifiers
- Video magnifiers
- Braille watches
- Braille printers
- Service dogs



The [Michigan Assistive Technology Guidelines for Teachers of Students Who Are Blind and Visually Impaired](#), is intended to guide teachers of learners who are Blind or Visually Impaired (BVI) in pre-kindergarten through grade 12 with assistive technology.

Examples of AT to Support Hearing

- Hearing Assistive Technology
- Hearing aids
- Visual alert system
- Captioning
- Headphones



The [Michigan Communication Plan for Students Who Are Deaf or Hard of Hearing](#) may help guide team conversations around individual strengths and needs.

Resources for BVI/DHH AT Considerations

Michigan Department of Education Resource for Blind/Low Vision and Deaf/Hard of Hearing (previously MDE-LIO) (<https://mdelio.org/>) offers:

- AT tools
- Adapted books
- Resources
- Webinars
- Much, Much, Much more!

Who Can Benefit From AT to Support Seating, Mobility, and Positioning

Learners who have difficulty supporting themselves in positions such as:

- Sitting
- Standing
- Walking

Examples of AT to Support Seating, Mobility, & Positioning

- Bolsters
- Strollers
- Ball chairs
- Wedges
- Standing frames
- Wheelchairs



Who Can Benefit from AT for Recreation and Leisure?



Examples of AT for Recreation and Leisure

- Switch adapted spinners
- Oversized dice
- Adapted utensil holders (i.e. crayons, paint brush, stamps)
- Raised line coloring sheets
- Adapted scissors
- Adaptive sports equipment
- Adapted gaming
- Adapted instruments
- Switch accessible toys/devices
- Environmental control devices

Resources in AT for Recreation and Leisure

[Michigan Disability Rights Coalition Lending Library](#)



AT for Recreation and Leisure

The [Michigan Disability Rights Coalition](#) houses a [Lending Library](#) for individuals of all ages, including many items for recreation and leisure activities.





AT for Socialization



Research (Caron JG, Light J.) demonstrates that social media has a positive effect on the lives of people who use AAC.

Social media is associated with:

- increased interaction and communication with more people
- improved social closeness with friends, family and co-workers
- reduced isolation and loneliness
- increased independence

AT for Socialization, cont. (1)

- building a self-identity and improved self-expression
- maintenance of personal interests and hobbies
- increased social roles, such as by becoming a blogger or mentor on a social media site
- improved physical health, improved access to advice, and improved information sharing with physician.



AT for Socialization, cont. (2)

Many electronic AAC devices now have platforms for using social media within the device itself, allowing AAC users to more fluently use social media for connection.



AT for Daily Living

Kitchen

- easy-grip utensils
- plate guards
- cutting boards
- jar openers
- apps for appliances



Bedroom

- bed rails
- bedside organizers
- large-number clocks
- reaching tools



Bathroom

- transfer benches
- shower seats
- handheld shower heads
- adaptive scrubbers



Clothing

- adaptive fashion for easier dressing (available in major retail stores)



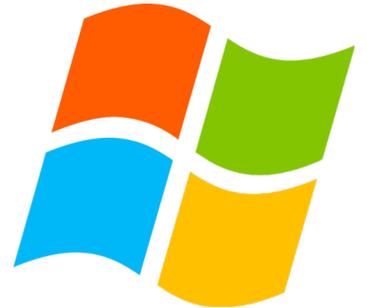
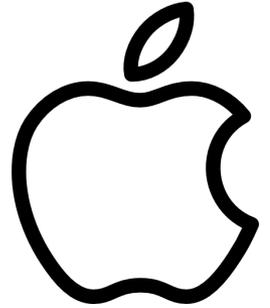
AT for Independent Living

Most of the AT we have already discussed can be utilized well into adulthood. As an individual moves away from the educational setting, it is important that they still have access to the tools that allow them to be successful and independent in their daily tasks and responsibilities.

When considering AT for adults, remember to **include their input in the process**. Focus on what they want and need to do.

AT for Independent Living: Accessibility

- [Android Accessibility](#)
- [Apple Accessibility](#)
- [Google Accessibility](#)
- [Windows Accessibility](#)



AT for Independent Living: Smart Home Devices

Smart home devices can make everyday life more convenient, safer, and social for adults with disabilities. These include technology such as:

- Smart plugs
- Cameras
- Sensors
- Voice activated speakers (Alexa or Google Home)



AT for Post-Secondary Education

Universities have legal obligations under Section 504 and the American with Disabilities Act (ADA) to provide equal opportunities to learners with disabilities.

Examples of AT may include:

- Qualified interpreters
- Open and closed captioning
- Materials in Braille
- Large print materials

Learners who are attending or will be attending college have the responsibility to request the AT or reasonable modifications.



AT for Employability

According to the Americans with Disabilities Act (ADA), **employers with 15 or more employees are required to provide “reasonable accommodations”** to assist self-identified disabled employees perform the functions of their job.



Support for Employers and Colleagues

The [Employer Assistance and Resource Network on Disability Inclusion](#) offers a self-paced learning guide to building an inclusive business culture.



The [Job Accommodation Network](#) provides several free resources for both employers and employees. Information on this site includes products, services, and strategies that may be discussed as accommodations based on limitations and work-related functions.

Assistive Technology Resources

Alt+Shift AT Lending Library

- Trial AT for students with individualized education plans (IEPs) ages birth-26 in Michigan public schools.
- The short-term trial periods assist schools in determining effectiveness before acquiring the AT, discovering the potential of their learners.



altshift.education/lending-library

Alt+Shift AT Lending Library, Cont.(1)

Select low-tech AT can currently be 3D printed and shipped at no cost. Keep it if it works for your student, send back if not!

- info.altshift.education/3DprintAT

We also produce custom keyguards (3D printed and acrylic)

- info.altshift.education/Keyguards

How AT Can Help Your Child:

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- organization AND
- written communication and/or computer access AND
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Please note: This is not an exhaustive list

Michigan Disability Rights Coalition (MDRC)

- MDRC is a non-profit organization devoted to creating justice and equity for individuals with disabilities, promoting collaboration, and dismantling obstacles.
- MDRC partners with individuals, families, and organizations to build inclusive communities, foster disability pride, and eliminate oppression.
- MDRC provides training, resources, and services to parents, children, and adults with disabilities.
- Includes AT lending library

Phone: 517-333-2477 or 800-578-0280

Email: info@mymdrc.org

Website(s): www.mymdrc.org or <https://mymdrc.org/lending-library/>



Quick Wins

- Brief, individual modules focused on one high leverage practice
- Designed for immediate implementation
- Focused on assistive technology (including augmentative and alternative communication), math instruction, and accessible digital materials



altshift.education/professional-learning/quick-wins

Alt+Shift Newsletter

Sign up for our monthly newsletter to stay informed about upcoming events, lending library items, and implementation tools and/or resources.



altshift.education/stay-informed

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Additional Resources

- [US Dept of Ed AT Myths and Facts](#)
- [Georgia Project for Assistive Technology Assistive Technology Consideration Resource Guide](#)
- [SETT Framework](#) (Joy Zabala)
- [Parent and Educator Guide for AT](#)

Questions



We are here to support you!

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For more information visit

www.michiganallianceforfamilies.org

Call 800-552-4821

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Michigan Alliance for Families

In collaboration with



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