Assistive Technology: What It Is And Why It Matters

Kelsey Brewer
Alt+Shift

Michigan Alliance for Families
information, support, and education

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Assistive Technology:
What It Is And Why It Matters

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Alt + Shift
Rethink the possible. Realize potential.

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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

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Department of Education

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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/).

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Accessibility Commitments

We have taken steps to ensure this deck is accessible.

- We used a tool(s) to perform an 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.

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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

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

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Rethink the possible. Realize potential.

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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.

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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

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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.

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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

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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.

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"For people without disabilities, technology makes things easier. For people with disabilities, technology makes things possible."

--IBM Training Manual, 1991

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An Introduction to AT
youtube.com/watch?v=bFheTcqRtdY

Alt + Shift
Rethink the possible. Realize potential.

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

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_____

AT Tools, Strategies, and Services

Oh my!

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_____
_____
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_____

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

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The Range AT Tools

No-Tech	Mid-Tech	High-Tech

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AT Strategies

Strategies can include modifications or accommodations

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AT Strategies Example (1)

modified print

modified print

modified print

modified print

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AT Strategies Example (2)

Modeling

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AT Strategies Example (3)

Peer support

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AT Strategies Example (4)

Teaching movements for communication

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AT Services

Supports that help with:
- choosing,
- designing,
- fitting,
- customizing,
- adapting,
- applying,
- maintaining,
- replacing,
- and repairing AT

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AT Services Example (1)

Training for:
- student
- family
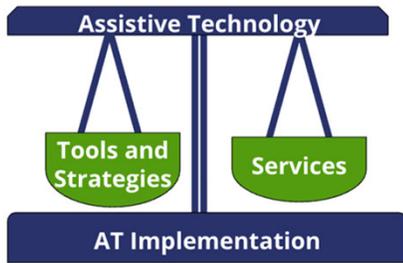- educators

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AT Services Example (2)

Selecting and customizing AT

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Tools and Strategies vs. Services:

All are equally important

Assistive Technology

Tools and Strategies

Services

AT Implementation

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AT Trifecta

AT

Tools   Services

Strategies

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Consider AT

but first…

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Consider Me.

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

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

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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

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

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

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

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Fact:
No person is too anything to use AT.

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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/

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Fact:
AT is a collaborative approach.

AT User
Family/Caregiver
AT Specialist
Collaborative Decision-Making for Assistive Technology
Special Ed Teacher
Ancillary Staff
Gen Ed Teacher
Technology Department
Administrator

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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.

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The SETT Framework, cont.

Student:
strengths, current performance and needs

Tasks:
tasks for learning the student will perform

Environment:
current learning environment(s)

Tools:
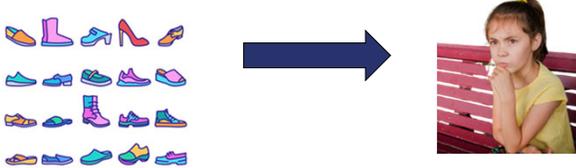current or potential tools that may benefit the student

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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)

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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).

Individual Strengths, Needs, and Preferences

Effective AT Tools

Tasks to complete

Features of a tool

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Feature Matching is: (1)

matching child's needs to a tool/strategy

SHOES

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Feature Matching is: (2)

matching child's needs to a tool/strategy

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Feature Matching is not: (1)

matching a tool to a child's needs

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Feature Matching is not: (2)

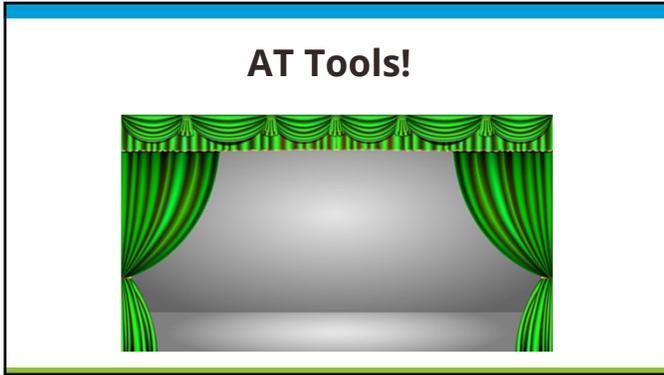matching a tool to a child's needs
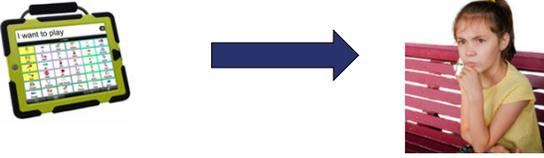
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In what ways has AT helped your child, or, in what ways do you think it could?

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

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AT Tools!

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Remember AT supports a variety of areas.

Gross Motor	Daily Routines	Hearing
Communication	Social Skills	Academics
Fine Motor	Behavior	Feeding
Independent Living	Extra-Curriculars	Self-Care
Computer Access	Seating	Executive Functioning
Literacy	Positioning	Employability
Sensory	Vision	Socialization
	Post-Secondary Education	Rec and Leisure

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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

5:00

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Areas of Need

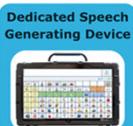|	
Communication	Recreation and Leisure
Reading and Writing	Socialization
Math	Daily Living
Executive Functioning	Independent Living
Vision	Post-Secondary Education
Hearing	Employability
Seating, Mobility, Positioning	Employers and Colleagues

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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.

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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

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Examples of AT to Support Math Instruction

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

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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

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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

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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).

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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.

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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.

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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!

MICHIGAN Department of **Education**

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

Learners who have difficulty supporting themselves in positions such as:

- Sitting
- Standing
- Walking

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Examples of AT to Support Seating, Mobility, & Positioning

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

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Who Can Benefit from AT for Recreation and Leisure?

EVERYONE
®
E
CONTENT RATED BY
ESRB

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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

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Resources in AT for Recreation and Leisure

Michigan Disability Rights Coalition Lending Library

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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.

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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

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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.

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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.

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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)

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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.

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AT for Independent Living: Accessibility

- Android Accessibility
- Apple Accessibility
- Google Accessibility
- Windows Accessibility

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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)

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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.

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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.

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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.

EARN
ADVANCING
WORKFORCE
DIVERSITY
Employer Assistance and Resource
Network on Disability Inclusion

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Assistive Technology Resources

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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

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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

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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

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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/

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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

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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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Find Alt+Shift on Social Media

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@AltShiftEducation

#AltShiftEd

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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

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Questions

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We are here to support you!

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For more information visit
www.michiganallianceforfamilies.org

Call 800-552-4821
En Español 313-217-1060
للغه العربيه 248-963-0607
info@michiganallianceforfamilies.org

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Michigan Alliance for Families

In collaboration with
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Michigan

Michigan Alliance for Families is an IDEA Grant Funded Initiative of the Michigan Department of Education, Office of Special Education (MDE-OSE); the Michigan Department of Lifelong Education, Advancement, and Potential (MiLEAP); and Michigan's Federal Parent-Training and Information Center (PTIC) funded by the U.S. Department of Education, Office of Special Education Programs(OSEP).

www.michiganallianceforfamilies.org
1-800-552-4821
info@michiganallianceforfamilies.org

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