Assistive Technology Domains

OCALI AT&AEM Center

Assistive Technology Domains

There are thousands of assistive technology (AT) supports that might assist a student to access, participate, and become more independent in a variety of school activities and tasks including both low- and high-tech options. The following is a chart that can help frame the various student needs that might warrant consideration and application of AT. The examples provided are just a small sampling of AT supports that are available within these domains. This chart is not intended to be an exhaustive list of possible solutions and should not be used as a way to select AT for a specific student. A careful assessment of needs which includes a feature- matching process is required for appropriate selection of specific AT to support a student.

Accessible Educational Materials

Students who need AT may also need accessible educational materials (AEM). Accessible educational materials (AEM) are print- and technology-based educational materials, including printed and electronic textbooks and materials that are designed or enhanced in a way that makes them usable across the widest range of learner variability, regardless of format. Accessible formats provide the same information in another form to address the barriers text- based materials can present for some learners. Examples of accessible formats include audio, braille, large print, tactile graphics, and digital text conforming with accessibility standards.

Areas of AT Consideration

- Reading
- Writing: Composition
- Writing: Motor Aspects
- Math
- Organization and Study Skills
- Communication
- Access to Electronic Devices
- Mobility
- Seating and Positioning
- Vision
- Hearing
- Activities of Daily Living (ADL)
- Recreation, Leisure, and Play
- Transportation

Reading – Options for adapting reading materials and tools to support all aspects of reading.

- Change in text size, spacing, color, background color
- Page turner, fluffer
- Accessible digital text
- Highlighted text
- Book stands
- Text-to-speech
- Text summary
- Comprehension support tools
- Digital conversion tools - scanners and OCR software, mobile scan-and-read apps
- Tactile aids
- Multimedia presentation formats
- Audio text/books
- Braille books
- Decodable (controlled) text
- Concept maps

Writing: Composition – Aids to support writing composition in the areas of grammar, spelling, drafting, composing, editing, and publishing.

- Outlining software
- Concept mapping
- Writing templates
- Graphic organizers
- Talking word processor
- Picture supports to write about
- Spell and grammar check
- Word prediction
- Handheld and online dictionary/thesaurus
- Tools for citations and formats
- Word or sound walls
- Word banks
- Speech recognition
- Braille notetaker
- Braille writer

Writing: Motor Aspects – Options to support students who struggle with handwriting and other text generation methods.

- Adapted grips for writing utensils
- Adapted paper
- Slant board
- Handheld scanners and apps
- Word processing
- Specialized keyboards (large, small, programmable)
- Word banks
- Word prediction
- Virtual pencil/letter board
- Weighted writing utensils
- Guided notes
- Signature or writing guides
- Recording devices
- Speech recognition

Math – Options to support access to math activities.

- Calculator
- Adaptive calculators (large print, talking, audio graphing, etc.)
- Graph paper
- Physical manipulatives
- Virtual manipulatives
- Specially adapted math tools
- Math modeling/graphing software
- Enlarged worksheets
- Math graphic organizer or visual supports
- Math processing software
- Speech recognition for math equations

Organization and Study Skills – Supports to assist with self, time, materials, and information management.

- Timers/alarms
- Schedules
- Attention, focus, engagement tools
- Color coding
- Calendars/planners
- Checklists
- Highlighting
- Electronic tools to reduce clutter and simplify information
- Reminders
- Rubrics
- Outlines
- Guided notes
- Cloud-based tools
- Online formatting
- Chunking/batching
- Notebooks/binders
- Multi-step assignment generator
- Templates
- Sticky notes
- Graphic organizers
- Masking
- Keywords
- Recording devices
- Sensory regulation tools
- Smart speakers and assistants (Amazon Alexa, Google Next, Google Assistant, Apple Siri, etc.)

Communication – Supports for individuals who have difficulty being understood and/or using or understanding language.

- Picture communication systems
- Object communication systems
- Tactile communication systems
- Computer based communication systems
- Voice output
- Voice amplification systems
- Talking word processors
- Visual scene communication boards
- Communication enhancement software
- Communication wallet
- Eye gaze boards

Access to Electronic Devices – Options to support the use of computers, laptops, mobile devices, TVs, and communication devices.

- Switch scanning
- Operating system accessibility features
- Large TV remote
- Smart assistants (Siri, Alexa)
- Alternative keyboards
- Mouthstick and headpointer
- Alternative mouse pointer with on-screen keyboard
- Head controlled mouse
- Eye gaze system
- Keyguard
- Touch screen
- Speech regonition
- Screen reader
- Screen magnification
- Joystick/trackball/trackpad
- Sip-and-puff

Mobility – Equipment that allows individuals to move as independently as possible.

- Canes
- Scooters
- Grab bars/rails
- Walkers
- Manual or power wheelchairs
- Building modifications and adaptations
- GPS mobility devices

Seating and Positioning – Supports that allow the individual to maintain the best position for learning, work, and other functional activities while reducing fatigue.

- Non-slip chair surface
- Footrest
- Bolster
- Adapted or alternate chair
- Sidelying frames
- Chair insert
- Head supports
- Trays
- Custom wheelchairs
- Adjustable bed
- Seat cushions/wedges
- Adapted desk/table
- Standing frame

Vision – Visual supports including low vision aids or tactile systems such as braille and tactile graphics.

- Large-print books
- Digital format books
- Magnifiers
- Screen enlargers
- Screen readers
- Beeping ball
- Cane
- Braille materials
- Color filters
- Portable/desktop video magnifier
- Text-to-speech software
- Use of tactile or auditory materials
- Braille keyboard or notetaker
- Braille embosser (printer)
- Screen magnification software
- Large screen/key calculator
- High contrast keyboard
- Talking calculator
- Light box
- Digital conversion tools such as scanners and OCR software
- GPS tools

Hearing - Amplification, visual and haptic supports for those who are Deaf, hard of hearing, or have difficulties with auditory processing.

- Amplifiers
- Closed captioning
- Classroom amplification
- Signaling/alerting devices
- Visual signals on the computer
- Personal FM systems
- Text messaging
- Vibrating watches /alarms

Activities of Daily Living – Tools that enable the individual to perform self-care/daily living tasks (i.e. feeding, dressing, toileting, grooming).

- Adaptive cups
- Jar/bottle opener
- Adapted doorknobs
- Reachers/grabbers
- Restroom grab bars
- Hook and loop fasteners
- Specially designed toilet seats/showers
- Environmental control systems (e.g. keyless entry, voice activated lights, etc.)
- Adaptive grooming/ dressing/cooking/eating aids
- Smart speakers and assistants (Amazon Alexa, Google Next, Google Assistant, Apple Siri, etc.)

Recreation, Leisure, and Play – Options for accessing toys, sports activities, crafts, and other leisure time activities.

- Adapted toys and games
- Adapted puzzles
- Switch activated toys
- Computer games
- Adapted art tools
- Modified stamps, scissors, paint brushes and drawing tools
- Beeping balls
- Adapted sporting equipment
- Adapted bicycle
- Battery operated recreational vehicles

Transportation – Adaptations to enable more independent travel within a wide range of environments.

- Spinner knobs for car steering wheels
- Ramps
- Foot pedal extensions
- Modified vehicle
- Adapted bikes and trikes
- Wheelchair lifts
- Adaptive driving controls