

A Look at Technology Use Across the Country



AT is an intervention to promote children's participation.
When embedded in activities & routines, AT can promote children's skill practice & learning.
AT is not a device, a switch, a toy, a communication board – but represents how those materials are used within a real-life context.

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Keelie will participate in play with her older sister before dinner by selecting toys & using her switch to turn them on.



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Robbie will participate at the playground by using his communication noodle to indicate choices (e.g., drink; people to play with; equipment to play on)



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What Should States Do to Increase AT Use with Infants & Toddlers? Self-Assessment Instrument



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Development Process: Content

- Review of best practices literature
- Use of QIAT indicators, with modifications to be appropriate for early intervention
- **Constructed an initial 112 item scale**
 - Child evaluation and assessment (51 items) (AT identification and decision-making; Progress monitoring; Team composition)
 - Individualized planning (writing the IFSP) (13 items)
 - AT Use and Implementation (13 items) (Implementation; Planning; Problem-solving)
 - System/Administration (35 items) (Maintenance; Training; Effectiveness)
- Items were rated on a Likert-type scale with responses of 1=Never, 2=Rarely, 3=Sometimes, 4=Most of the time, and 5=Always.
- Responses were also available for respondents to indicate "I'm unsure" or "Question unclear". These responses were treated as missing data, but were useful in the development of the scale items.

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Primary Content Areas

Evaluation/Assessment
Individualized Planning
AT Implementation & Use
System Supports

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Development Process: Pilot Sample

- EIs (n=293) completed 112 item self-assessment online
 - Represented 34 states
 - OT (11%);PT (14%);SLP (14%);Teacher (36%);Other disciplines (24%)
 - Age range 23-68 (M=43)
 - M=16 years experience in their professions
 - M=12 years of experience in early intervention

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Scale Reduction: Reliability Analyses

- Reliability analyses were conducted to identify and exclude any redundant or unreliable items
- To assess reliability of each domain, Cronbach's alphas were calculated.
 - Based on reliability analyses, items that were highly correlated (i.e., had item-total correlations > .70) were deleted from each domain.
 - Items that were unreliable (i.e., item-total correlations < .30) were also deleted from each domain.

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Scale Reduction/Revision: Expert Review

- Sixty-three item scale was reviewed and three more items were dropped because they overlapped
- Sixty item scale sent to a panel of AT 8 experts
 - Rated items as: legally required, essential, recommended, not recommended; unclear
- Scale further reduced to final 55 items
- Data on website represents the final 55 item scale completed by agency directors or state-level personnel (Likert ranging from 1 (never) to 5 (always))

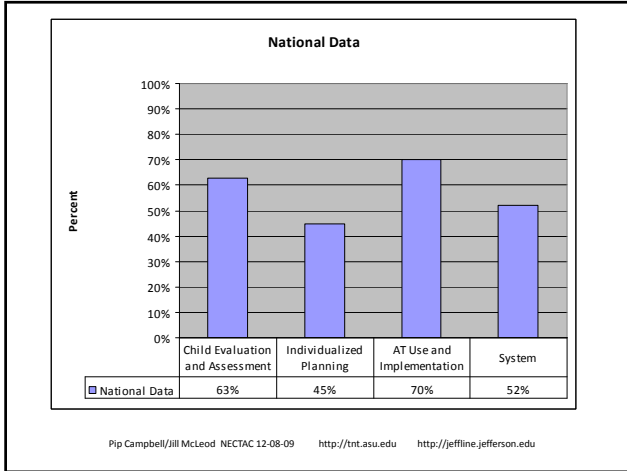
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Self-Assessment Scoring

- Percentage agreement with the expert panel for each item

Agreement Criteria	Legally Required	Essential	Desirable	Not Recommended
Always/most	+	+	+	-
Sometimes	-	-	+	-
Rarely/Never	-	-	-	+

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- ## Results: Patterns
- 18 States: Greater than 50% agreement with the experts in all four areas of the scale (n=18 states)
 - 6 States: Three areas below 50% and one above
 - 2 states above in AT Use and Implementation
 - 1 state above in System
 - 2 states above in Child Evaluation and Assessment
 - 12 States: Three areas above 50% and one below
 - 9 states low in IFSP
 - 3 states low in System
 - 10 States: Two above and two below: IFSP and System below 50% and AT Use and Child Evaluation above 50%
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Welcome to Tots 'n Tech!
Last updated: Sep 09th, 2009

The Tots 'n Tech Research Institute (TnTI) is an inter-university collaboration between Thomas Jefferson University (TJU), Philadelphia and Arizona State University (ASU), Tempe. TnTI's mission is to provide up-to-date information and resources about AT use with infants and toddlers for states, Early Intervention providers of all disciplines, and families across the country. In order to achieve this mission, TnTI provides technical assistance to states to help them enhance the use of AT with infants and toddlers and conducts a national research program about use of assistive technology (AT).



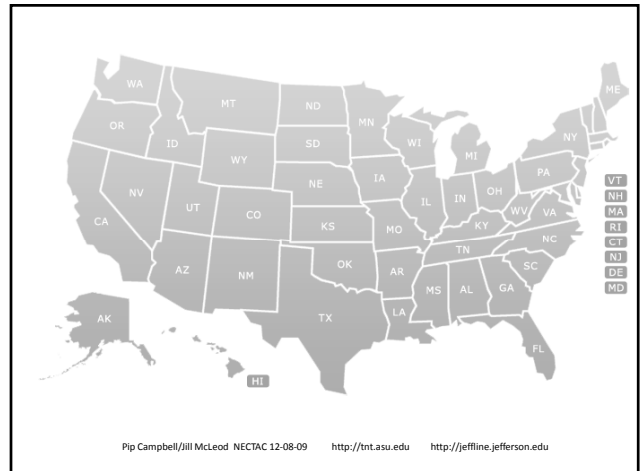
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manipulating objects getting around playtime physical disability mealtime fine motor skills socializing with peers and adults morning routine table top game community outings CP can't hold things holding objects physical disabilities hand-eye coordination can't grasp turning the pages independently turning pages of a book can't use fingers fine motor difficulties can't turn the page story time communication tone travel time using arms and hands book reading help sitting fine motor problem can't pick things up fine motor delay toys w/ holding picture cards outdoor

Assistive Technology Self-Assessment Results What's This?


Click a state on the map below to see the self-assessment profiles and resource briefs.







Ideas to Share





 Ideas to Share



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Look Up By Keywords or By ----

- Functional Skill
- Activity or Routine

- Errands
- Chores
- Outings
- Mealtimes
- Indoor Play
- Bathtime
- Morning
- Evening
- Outdoor Play (Physical)

-  Communication
-  Socialization
-  Mobility
-  Arms and Hands

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The object calendar or visual shelf can be a useful tool to help a child develop and expand on anticipation and to communicate to others that he understands what is coming next in the daily schedule or next in a favorite activity.

Instructions:
 Determine what activities a child enjoys, or if you are using the object calendar for the steps of a favorite activity such as grooming. Determine the steps within the specific activity.
 Place a picture that includes several of these activities or steps. In addition, what required activities that the child may not enjoy or which may be included with a representative object or piece of object.
 Take various objects or pieces of objects that can be used or touched for each of the activities. For example, a small toy may represent tooth loss or a small clothes hanger represent grooming. If a moment is not suitable or would not communicate the meaning, then use a piece of something. For example, a piece of fabric that looks like the child's coat may be used to represent time to leave.
 Place the objects in a sequence so that the child can have the objects arranged in a series of small containers connected together.
 Before using the object after the activity has taken place or have a container nearby to place each object as so that activity ends. The communication that the activity is "all done" for that action.

Source: U.S.S. Shingler Performance for Young Children, Wisconsin Institute Technology Institute (WATI), IDEA L, 148 E High St., Madison, WI 53706. Phone: 608 785 4233 or 608 785 4276, Email: wati@wati.org

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Topical Newsletters

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Argumentative & Alternative Communication (AAC): The Basics

What is argumentative and alternative communication (AAC)?

The term AAC typically refers to an area where the focus is on improving communication skills, often in a combination of strategies, techniques, methods, and aids that increase the user's ability to communicate effectively with their environment.

AAC systems can fall into two categories: unaided and aided communication. Unaided communication doesn't require any external equipment. It can include sign language, hand-drawn pictures, hand-drawn symbols, etc. Aided communication means that an external device is needed to communicate. This can include picture boards, electronic devices, voice output systems, and much more. Although most AAC systems will use both unaided and aided communication, this newsletter will focus on aided communication using the best (and most) devices.

Why is AAC important?

The ability to communicate effectively is an extremely important part of life. It allows us to interact with others and participate in daily activities. When a child's communication is not effective, functional, and/or not used by the child and the people with whom they interact, then something is wrong. For all children, the ability to communicate is based on each child's own abilities, which can be as simple as having an effective ability to produce the sounds. For children whose verbal and nonverbal language are impaired, AAC can be used to help them communicate. AAC systems can be used to help children with hearing, cognitive, physical, and/or other disabilities communicate. AAC systems can be used to help children with autism communicate.

What are some ways that a child can communicate using AAC?

Anything from actual objects to high-tech low-tech to promote communication. Once a child begins to understand more abstract concepts you can introduce more ways of communicating. Below is a list of ideas:

- The actual object
- Picture of the object
- Mimicry of the object
- Picture of the sound
- Mimicry from program
- Electronic symbols
- Icons to represent objects or events or symbols, can have multiple meanings in different contexts.
- Text

Communication Begins at Birth, It continues throughout the individual and into a child's life!

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