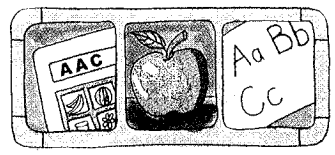
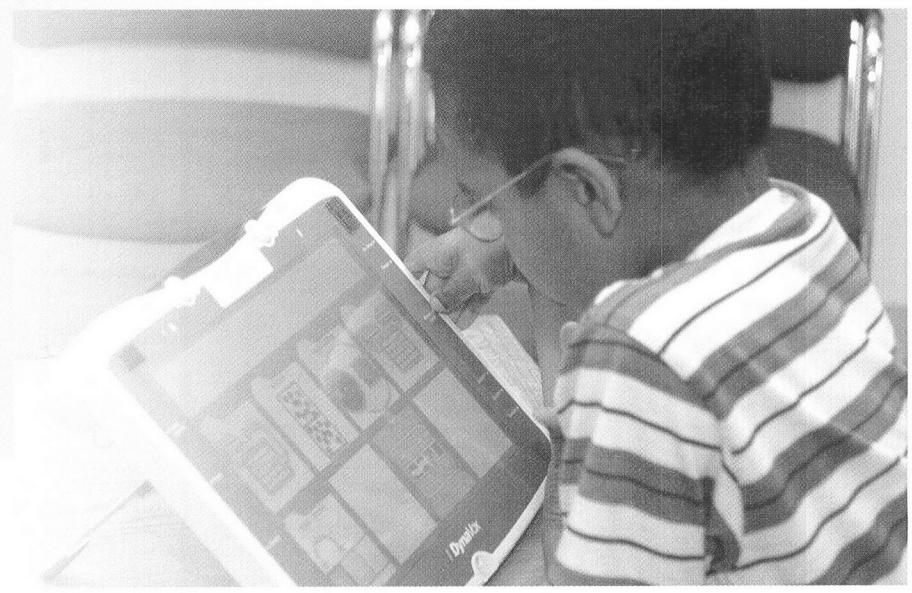


Integrating AAC Into the Classroom

Low-Tech Strategies

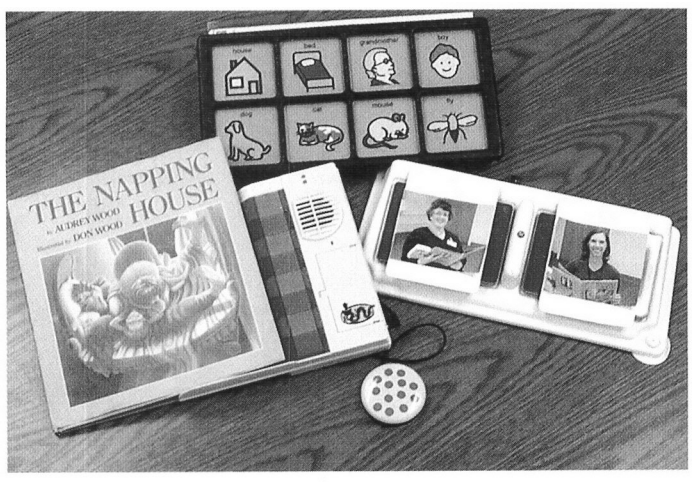


by Debora Downey, Peggy Daugherty, Sharon Hell, and Deanna Daugherty

According to ASHA, approximately 2 million people in the United States have difficulty or are unable to communicate using oral language (see **www.asha.org/public/speech/disorders/Augmentative-and-Alternative.htm**). For a large number of these individuals, an augmentative/alternative communication (AAC) system may be a tool to either supplement or replace their limited oral communication attempts. Although many equate AAC with high-end technology and high expense, for some potential users the most ideal AAC systems are often low-tech solutions with a minimal price tag. The key to implementing low-tech options in the classroom is identifying appropriate low-tech strategies and pairing them with motivating classroom activities that are rich with communication prospects.

Role of the IEP Team

The task of integrating a student's AAC system into a given curriculum should include all IEP team members. The process should begin with the team reviewing the student's goals and identifying the child's academic and communication levels as well as needs. Once this has occurred, a mapping tool is useful to identify and separate academic goals from communication goals. This is necessary because there may be times when overlap of these two items occurs and the team must identify, for each instance, when the academic goal takes priority over the communication goal or vice versa.



Reading tools

No system is a cure for the academic or communication needs of a developing child with a communication or cognitive impairment. Rather, AAC is a process that enhances the child's ability to communicate. Clearly, there will be instances when using just one low-tech or high-tech solution will not be viable in the classroom setting. Therefore, the challenge of the IEP team is to identify multiple strategies and pair them with the right classroom activity to allow for ease of integration and opportunities for communication and/or learning.

A *visual mapping tool*, often called a "curriculum tree," can be used to guide the IEP team in planning how and when a student will use the communication system. This mapping tool is simply a sheet of paper with various boxes in which the IEP team identifies a student's daily classroom activities (i.e., arrival, circle time, reading, recess, lunchtime, show and tell, etc.). In each box the desired activity is listed, along with the identified communication strategies that will be provided to the student during the classroom activity. The IEP team may list how often the strategies are to be used and who is responsible for programming or fabrication of any low-tech aid. The curriculum tree provides the IEP team with a written plan to ensure that team members' expectations are identified.

Other examples of mapping tools can be found in sidebar on p. 7. This resource book offers practical planning sheets and suggestions related to integration of assistive technology in IEP goals and objectives. Additionally, the Wisconsin Assistive Technology Initiative (**www.wati.org**) has created tools that assist with technology assessment, planning for implementation, and integrating communication systems in school settings.

Since several low-tech AAC strategies may be used, it is important for the speech-language pathologist to be able to identify and educate the IEP team regarding the various low-tech strategy options (see the sidebar on p. 36). Although students may have a main speech-generating device, they may use one or more of the following low-tech solutions depending on time constraints, setting, and level of fatigue due to neuromuscular status. The following 10 examples, which include names of specific solutions (see sidebar on p. 7 for more information) are practical ideas for various school activities.

Arrival

- Yes/No questioning—regarding hot or cold lunch option for the day.
- Live voice scan—regarding who children want to be their "helper" for the day or who they want to sit by at circle time.
- Single message units can be used to greet staff or peers.
- A sequential message unit can be used to allow for communication regarding arrival topics, such as requesting assistance with removal of outerwear or items in a backpack.
- The student can use a multiple location device to make comments or respond to questions.

Pre-Literature Activity

- A two-choice communication system to allow the student to participate in pre-reading activities such as making a choice of books, selecting a reader, or selecting the type of voice used to read the story.
- An aided language-stimulation approach can be used regarding set up activities (i.e., book choice, reading location, and reader).

Literature Activity

- A single message device can be used for the student to request that the page of a book be turned or the repetitive line of a story be read.
- The student can use eye gaze to identify vocabulary words upon request.
- An aided language-stimulation approach can be used regarding repetitive topics in the book (i.e., *Brown Bear*—icon choices can be a brown bear, blue horse, goldfish, and eyes for "I see a...")

Post-Literature Activity

- A picture communication board can be used for the student to comment on a story or to make requests. For example, the student's communication options might be "That's scary," "That's funny," "Read it again."
- Yes/no questions or live voice scan can be used to assess the student's comprehension of the book.

Social Studies

- The student can activate a sequential message device to call on peers or identify a state and have a peer name the corresponding capital.
- The student can use a switch-activated spinner to select a picture symbol of a state and activate a single message device to request the name of the state.
- Picture symbols can be sequenced to represent events of a trip.
- A multiple location overlay can be used on a voice output device to direct peers to move from location to location on a map.

Math

- The student can use a switch-activated spinner to select numerals to create math calculation problems for their classmates to compute.
- A multiple location overlay can be used on a voice output device for the student to identify values of mixed groups of coins.

Sharing

- Velcro can be used to attach a souvenir onto a single message device. Students can activate a prerecorded message to give details about their souvenir to the class.
- The student can demonstrate an electrically powered toy with a switch, activated with an AAC device.
- The student can demonstrate a battery-operated toy using a switch with a battery device adapter.
- A multiple location overlay on a voice output device can be used for a student to direct peers in a multiple step recipe or experiment.
- A student can ask peers questions or make comments using a multiple location communication device.

Lunch

- Students can use a customized lunch tray, lunchbox, or placemat with picture symbols to make comments or requests in the lunchroom setting.
- The student can use any multiple location voice output device to order lunch items.

AAC for Lunch and recess

Recess

- Wristbands can be created with digital photos for choice making between recess activities (i.e., swing, slide).
- The student can wear a fanny pack or a janitor key ring with photos or picture symbols representing choices for recess activities, peers to play with, or general comments and requests.
- The student can use a play mat for indoor recess. For example, place picture symbols on a placemat for a bubble-blowing activity (pop it, blow a big bubble, blow a small bubble).
- A device with a series of sequential messages can be used to direct peers during a game situation (Simon Says).

Departure

- The student can use a single-message device to relay a message about events of the school day to the home setting.
- Live voice scan can be used to have the student select whom they want to sit by on the bus.

It is important to note how we program the devices. Messages can be dull or depict the child in an unnatural way as a well-mannered small adult. We often tend to program the devices to reflect our own vocabulary and pragmatic skills inconsistent with the abilities or age of the student. In order to capture the true essence of the student better, it may be necessary to conduct language sampling of peers in the targeted environment(s) where the student will be using the system. Examples of peers' language structure, vocabulary, and interests can guide the SLP in vocabulary and message selection to ensure that the AAC system is a reflection of the student and not the programmer. A language sampling from a lower elementary classroom may reveal examples

See ***AAC*** *page 36*

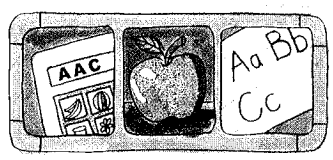
Mapping Tools

The following are examples of some available devices, used for illustrative purposes only:

- Single message devices (BIGmack, Ablenet; One Step, Ablenet; or Partner/One, AMDI)
- Sequential message units (Step by Step, Ablenet or Sequencer, Adaptivation)
- Switch activated spinner (All-Turn-It-Spinner, Ablenet)
- Picture symbols (Boardmaker, Mayer Johnson)
- Battery device adapter for battery-operated toys (Ablenet)
- Switch activator for use with battery-operated toys (PowerLink, Ablenet)

The National Joint Committee on the Communication Needs of Persons with Severe disabilities has published guidelines for service delivery. Visit **www.asha.org/njc** for more information.

AAC from page 7



such as "it's my turn," "I want that one," "when is it time to go home." Sampling from upper elementary students may reveal examples such as "let's get out of here," "what's up?" "give me that one, " "gross," "cool." Interaction will be enhanced through the selection and programming of age-appropriate vocabulary.

Finally, it is appropriate to include negative comments on the student's AAC system, as long as the vocabulary used in the protest is appropriate for the classroom setting. If the student makes a selection that indicates, for example, "I want to stop now" and ending the task is not appropriate, the communication partner should be instructed to acknowledge the communication attempt and over-rule the request as they would for any other "normal speaking" student in the classroom. Such negative comments allow the student's feelings and sentiment to be noted and may reduce instances of negative behavior.

Communication Strategies

Yes/No

A communication strategy that requires the student to have a consistent "yes/no" response (i.e., eye gaze up for yes and eye gaze down for no). The communication partner can ask a yes/no question regarding any communication or academic topic or the student can be given two choices verbally with the communication partner using the identified yes/no response to indicate the student's choice. This method is typically easy and reliable if the student demonstrates the necessary prerequisites.

Live Voice Scan

A communication strategy that requires the student to demonstrate the ability to make choices and access a switch. This strategy requires that the student demonstrate the necessary receptive language abilities to be able to choose from a verbal menu that the communication partner verbalizes in a sequential fashion. The live voice scan strategy outlines the choices for the student and the student indicates choice by accessing a sequential message device that offers three varying messages (i.e., "I want that one," "That is my choice," or "That's the one I choose"). "Live Voice Scan" can be implemented in the absence of a switch or voice-output device using a lower-tech alternative. The child could make a physical or vocal signal in response to the "Live Voice Scan" rather than using the switch. This option may be more appropriate in some settings and doesn't require purchase of any equipment. This method can be used to indicate or respond to social or academic questioning. It is typically easy and reliable if the student demonstrates the necessary prerequisites.

Aided Language Stimulation

An approach in which the facilitator points out picture symbols on the child's communication display in conjunction with all ongoing language stimulation. Through the modeling process, the concept of using the pictorial symbols interactively is demonstrated for the individual (Goossens, Crain, & Elder, 1992, Engineering the Classroom Environment for Interactive Symbolic Communication—An Emphasis on the Developmental Period, 18 Months to Five Years). This approach is ideal for those individuals who demonstrate minimal picture/symbol/icon recognition. Often this approach is the first step in building iconic vocabulary.

It is our hope that clinicians, teachers, and classroom aides can be exposed to the many possible ways to implement low-tech communication strategies for their students. By following these basic guidelines IEP teams will be more prepared to implement the communication systems, with the result being greater inclusion and empowerment of our students.

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Sports *from page 23*

Fairport, NY, says that an FM could provide an additional benefit, depending on the degree or configuration of loss. With an FM, student athletes would be more likely to hear the coach going over plays on the sidelines or during time-outs. "However, it isn't fair to hear the coach during play when no one else from the team does. There's the rub—who is going to monitor when the coach is transmitting with the FM?"

Terese I. Huber, an audiologist with the Atlanta Area School for the Deaf (Clarkston, GA) commented via the ASHA audiology list-serve, "The worst thing that can happen to any hearing instrument during sports activity is not to wear it."

Some students want to wear their hearing devices only during a game, but it should also be worn during practice, she said. "The students need to learn what to listen for—footsteps, a dribbling ball approaching, opposing student conversation, team mate signals, and so on."

Cochlear Implants and Sports

Students who have cochlear implants require accommodations to play sports. In addition to using an FM system, techniques include:

- Wearing sweatbands with hooks to keep the band & CI together,
- Wearing a cap made from a nylon knee-high. This keeps the processor on and helps keep dirt and dust out.
- Sewing a pocket in a sports bra to hold the processor
- Taping the cable to the student's neck using easy off surgical tape

More information is in *Time Out! I Didn't Hear You*, available at **www.pitt.edu/~cvp/timeout.pdf**. Sign up for ASHA's audiology electronic mailing list at **www.asha.org/members/aud/default**