Using Aided Language to Develop Skills with Augmentative Communication Displays

Contributed by Beverly Vicker

Adult Modeling of Communication Display Use

Learning to effectively communicate via an augmentative communication display or device can be challenging for any student who is nonverbal, minimally verbal, or a struggling but emerging verbal communicator. It can be an especially difficult task if the student has an autism spectrum disorder (ASD). These students usually lack role models who use an augmentative means of communication (AAC). In addition, adult caretakers may not always understand the complex demands and limitations of using AAC. This article will explore, primarily by example and description, selective aspects of ONE language intervention strategy called Aided Language. This article focuses on only one aspect of the adult role in an AAC intervention program i.e., how, during a planned activity, the adult may informally direct the student's attention to:

- The physical layout, design, and mechanics of the equipment or AAC display (the physical layout may be a non-electronic topic board or a page within an electronic AAC device);
- The vocabulary and expressions featured on the display;
- The variety of communicative functions or types of messages that can be expressed within the limited display;
- The grammatical expression of ideas; and
- The strategies used to extend the expression of meaning beyond the vocabulary on the display.

For purposes of this article, a non-electronic topic board will be the vehicle for demonstration of Aided Language. Even if a student uses an electronic device for communication, some well known AAC interventionists such as Joan Bruno (2006), still use a non-electronic display to teach many of the skills mentioned above.

Creating an Activity Based Communication Display

Prior to the use of Aided Language on a topic board, an activity board or page must be designed. The speech pathologist, parent, and/or classroom teacher identify situations in which the child/student could use a more effective means of communicating messages. The vocabulary needed is selected on the basis of what would be useful for a highly interesting child-oriented activity and for the level of grammatical use to be encouraged. For example, for a child who is using single words, the goal would be to assist in developing two word utterances. That means that a display would need to contain object names, verbs or action words, adjective or descriptor words and location words. There may be other functional elements that one may also wish to foster. The next step is to organize the display of vocabulary. The topic board attached to this article is organized in a modified Fitzgerald Key format with groups of words classified by function. Each class of words also has a common background color which makes it easier for a child to recognize the location of a group of words and then the specific word needed (see the attached example board). Being able to find a needed word easily can help motivate the child's use of an AAC display. A layout can be sketched with just handwritten words in a grid before actually doing a layout display using Boardmaker™ (a computer based collection of line drawing symbols and display formats). An adult may want to imagine use of the display during an activity by trying to communicate via the rough draft grid. Such an exercise might provide ideas for new vocabulary to add to the potential display. The topic board used in this article was generated on 3 separate pages with Boardmaker™ while the fourth page which contained pictures of people was

constructed using digitalized photos. Two pages were joined to form a front and back display with enough vocabulary and pictures of sufficient size for a young communicator.

Communication displays can be introduced to some children who are as young as two years of age. What a display looks like in terms of number and type of vocabulary displayed, the size of the vocabulary squares, and so forth, depends to a significant degree on the strengths and challenges of the child's language comprehension abilities and his visual discrimination abilities. On a non-electronic display, selective vocabulary can always be covered until the child is familiar with core or highly salient materials.

Adult Use of Aided Language

How an adult begins an introduction to a topic display depends on the individual child. The interaction might be very short and consist of singular demonstrated messages on the communication display by the adult during the initial stages. The child may have more interest in the display if he initially experiences getting something by using the display for communication. The expectations or task demands for the child can vary from the child watching what the adult does to communicate a specific request to the adult requesting the child to mimic, repeat, or rehearse the modeled message on the display. It is preferable to aim for flexible rather than scripted use, but the latter may be necessary with young communicators.
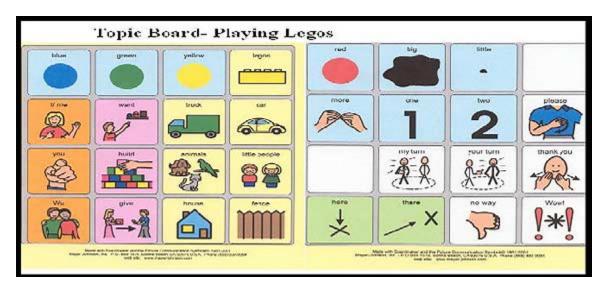
For an early communicator, the adult would only produce short modeled sentences. The adult does not need to have all of his words backed up by the vocabulary on the display. So the adult might say on his own behalf, "Want red Legos, please." as he points to the word "red" on the display of a beginning AAC communicator. For the child with more language skills, the adult might present a more comprehensive grammatical model by pointing to each of the four words on the display.

It is preferable to let the beginner child watch on several occasions and then he or she might initiate on his or her own and possibly surprise you. This SLP learned that lesson with a 5 year old boy who had never used a topic board or a communication display. Access to any Lego pieces was under adult control. He knew his colors, so he was asked via speech and the display board if he wanted a "red" or "blue" Lego. Without prompting, he replied via the board that he wanted "green." Within that instance, this nonverbal child with ASD demonstrated that he had some idea of how this system might work, at least for expressing a color preference. So, adults need to allow opportunities for spontaneous use instead of immediately teaching a scripted or fixed routine for an activity.

As stated earlier, these children generally do not have models of someone using their system, so allow for the possibility of the "aha" or sudden insight phenomenon. If, after several occasions, the child has made no attempt to use the display, the adult can then shift roles from the adult as a demonstration communicator to the adult as an instructor. He can tell the child, "Want a red Lego? Touch here." (the red color symbol on the board) and hand over the colored Lego piece if the child touches the color symbol. If the child fails to act, the adult may want to repeat with a tap to the picture or a light physical assist to touch it, followed by delivery of the Lego. This dual role of demonstration communicator and instructor can persist throughout the intervention program.
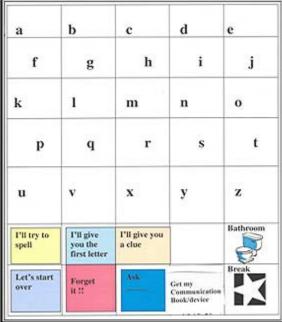
Understanding how the various goals outlined earlier can be achieved with a topic board can be demonstrated by using a front and back panel of a topic board about playing Legos. What is shown needs to be within what the educator's call the zone of proximal learning. This means the examples will stretch the child a little beyond what he might easily manage but without making the content too difficult to comprehend.

Learning by Example—Aided Language and a Lego Activity

The backside of this paper based display might include the following material:

In order to accomplish the goals listed earlier, the adult may do any of the following:

- Show though use and/explanation (if in teaching role) what vocabulary is available and where. ("Red" is by the other colors at the top of the board. "Little people" is by the "truck" and "animals" [with object words].)
- Demonstrate various communicative functions such as commenting, asking questions, giving direction, and making requests as part of the natural activity.
- Model grammatical sentences of length that are one word or more beyond what the child is using.
- Demonstrate how to manage situations when key vocabulary is not available with this display board. For example:

    ○ Turn over the front display panel to access a specific vocabulary picture on the back panel. For example, to request that a classmate play Lego, flip over the main display and point to "Sean" (physical access to vocabulary).
    ○ Flip over the display as needed during an aided utterance. For example, the adult says "I heard Sandy "(points to picture of cat) "had 2 "(points to number 2 on front display), "2" (point again) and "2" (point again) "kittens. That means six kittens." The adult could also hold up 6 fingers to show an alternative way of expressing "six"

once the topic of Sandy is established. Also with the topic of Sandy established, the adult could point to "Sandy" and gesture a side to side rocking sign to signify baby kittens.

- Spell the needed vocabulary e.g., "k-i-t-t-e-n-s." Let the listener know what is happening by pointing to "I'll try to spell" prior to the spelling attempt. (This strategy might not be used unless the child is 4 or 5 years old and demonstrating some awareness of print.)

- Provide the first letter of the target word and explain that the listener may have to guess. Point to "I'll give you the first letter" and then points to "k." (This strategy might also be delayed until the child has some beginning awareness of print but is not yet a speller of complete words.)

- Refer the communication partner to someone else who can more completely tell the story. With reference to the cat, point to "Mom."

- Provide a clue to meaning by pointing to the message "I'll give you a clue" and then use topic board words or gestures to suggest meaning. By pointing to "blue" and "animals" it might be possible to figure out that it meant Blue from Blue's Clues. (This strategy might not be introduced until the child is four or five old and its introduction may need to be accompanied at other times by practice playing guessing games. Some children, on the other hand, seem to have a natural awareness of this as a strategy.)

- Refer to one's main communication system where more vocabulary would be located. Indicate this by pointing to "Get my communication book/device." Better yet, have the message say "I will get my communication book/device by myself."

- Show how to manage a situation where there is a breakdown in communication. The adult can verbalize that there is a problem and he needs to figure out what to do. He can tell someone:

  - By touching the message which says, "Forget it," the adult can demonstrate one way to deal with a confused listener. This can be used for confusion over the whole message or the attempted spelling of a word.
  - By touching the message which says, "Start over," it tells the listener to forget what has been presented and begin again from the beginning.
  - Demonstrate how to request a "break" or access to the "bathroom."

Learning how words are combined builds awareness of how meaning is expressed and this builds a foundation for reading. It is easy to overlook the need to experience sentence generation when some electronic devices have whole messages available at the touch of a button or when sentence generation represents a significant effort and consumes a substantial amount of time for the AAC communicator. The following are example utterances that can be modeled and verbalized during an interactive session about Legos while using the non-electronic topic board presented earlier.

Examples of Adult Use of Aided Language

The setting for this scenario is a preschool classroom. The speech language pathologist joins the child with ASD at the Lego table. She puts the majority of the Legos into the drawer of the Lego table so access to additional Legos is under her control. She posts the topic board at eye level on the wall by the Lego table. (Some items on the topic board might be covered if there is a concern that the child may be overwhelmed.) The child with ASD is five years old and has some basic familiarity with topic boards. Other children may join the activity for a few minutes and then leave. Some may also point to symbols on the topic board as they talk about the Lego activity; this provides additional modeling for the child with ASD.

The following statements are uttered by the speech language pathologist as she points to specific words on the topic board display. The words touched on the display are underlined in the text.

You want red or yellow Lego?

(question said with rising inflection)

Oh, you want yellow Lego.

(affirmation)

I want two big red Legos

(comment as adult helps himself)

Wow, big fence.

(comment, praise for child's building)

You (point to word and child), me (point to word and then self), we (point to word and back and forth to both parties several time)

build house? (pronoun use)

Please, give truck?

(polite request)

Thank you.

(social acknowledgment)

You build big (pause). Uh-oh, no word. I'll try to spell. T-O-W-E-R. Big tower (spelling).

"I build here" and point. "No way?" as child expresses protest. You said "No way." Don't do that (shows how to protest using symbolic language).

My turn. I want more little people.

(assertion about turn)

Give me car please

(contains indirect object)

Of course, the above materials will be too complex for some children so the level of the display and the adult modeling may need to be scaled down or conversely expanded for those who need more complex demonstrations. It is easier to use a single display such as the Lego board for teaching grammar/functional use than to flip back and forth between levels of an electronic device. The objective is to show the child how to use language and once he is familiar with what might be said, the child must learn to adapt this knowledge to his AAC system, or in the case of the child with some verbal skills, to his combination of verbal and nonverbal message symbol use. The notion of attempting spelling, and using gestures and cues are important strategies to learn to expand a system's vocabulary.

One of the advantages for the adult when he or she uses Aided Language is that he or she experiences what it is like to use the child's communication equipment. It gives new insight into understanding the child's frustration and sometimes lack of motivation to communicate via AAC. The significant need for literacy and spelling skills becomes obvious. The Aided Language experience can also help parents or educators develop new strategies, train new skills, and ensure more vocabulary of interest to the child.

Summary

Many different strategies need to be employed in the quest to help children with ASD develop language, communication and literacy skills. Giving a child visual demonstrations of AAC and language usage through the application of Aided Language strategies can add a powerful component to an intervention program; the strategy might also produce some surprising outcomes.

Resources

Bruno, J. (2006, April). Language development and disorders in AAC: Translating knowledge into practice, Part II. Presentation at the Indiana Speech Language and Hearing Association Conference, Indianapolis, IN.

Goossens, C. Crain, S. & Elder, P. (1992). *Engineering the classroom environment for interactive communication- An emphasis on the developmental period, 18 months to five years*. Birmingham, AL: Southeast Augmentative Communication Publications. (Although this publication focuses on using aided language for a classroom of children rather than via a personal AAC system, it contains much useful information that is still relevant many years after the initial publication.)

Mayer-Johnson LLC (2007). Boardmaker (Version 6.5) [Computer Software]. Solana Beach, CA: Mayer-Johnson LLC.

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