Weaving the THREADS OF COMMUNICATION

By Marsye Kaplan and Deborah Gerson

INTRODUCTION

How do you feel about the low tech communication systems you are developing? Are your clients able to communicate efficiently and effectively? Can they question and comment or stay connected to the conversation? For most of us who are responsible for creating communication systems, these questions haunt us daily. Did you ever consider why your clients are not using their communication systems for functional or interactive communication? You may feel confident that their physical access is appropriate, but do you feel as confident about the vocabulary? How do you determine which words are the most essential for your client?

After attending a session presented by Bruce Baker, founder and president of Semantic Compaction Systems, at an American Speech and Language Hearing Association Convention, the assistive technology staff of Baltimore County Public Schools reconsidered and revamped their process of vocabulary selection. This new process proved to be successful, opening the doors to functional and interactive communication. We have seen a significant difference in student access to and use of the new format since its inception. Teachers are motivated to make these low tech systems available because they are witnessing spontaneous and independent communication by their student users.

BACKGROUND

In the past, regardless of the type of communication tool that was provided, whether a communication display, a communication book or a speech-generating device, many users were significantly limited in what they were able to say. This constraint was largely the result of the vocabulary words that were chosen for inclusion. Word arrays frequently focused on specific tasks or activities or were dependent upon the environment. Another characteristic was that these words were predominantly comprised of nouns.

Opportunities for communication were routinely limited to choice making or to the "show me" situation, where students are asked to show the facilitator the location of named items. Regrettably, asking our users for a show me type of response is not supportive of functional, generative or interactive communication. The same can be said of words linked with choice making. Consider vocabulary associated with mealtimes, such as the names of foods, drinks and required utensils, or vocabulary associated with trips out in the community, such as the names of modes of transportation, stores or denominations of

FUNCTIONS OF LANGUAGE

- Greetings
- Requesting
- Comment
- Descriptions
- Name
- Existence/non-existence
- Rejection
- Cessation
- Self, possession
- Direct action
- Associative

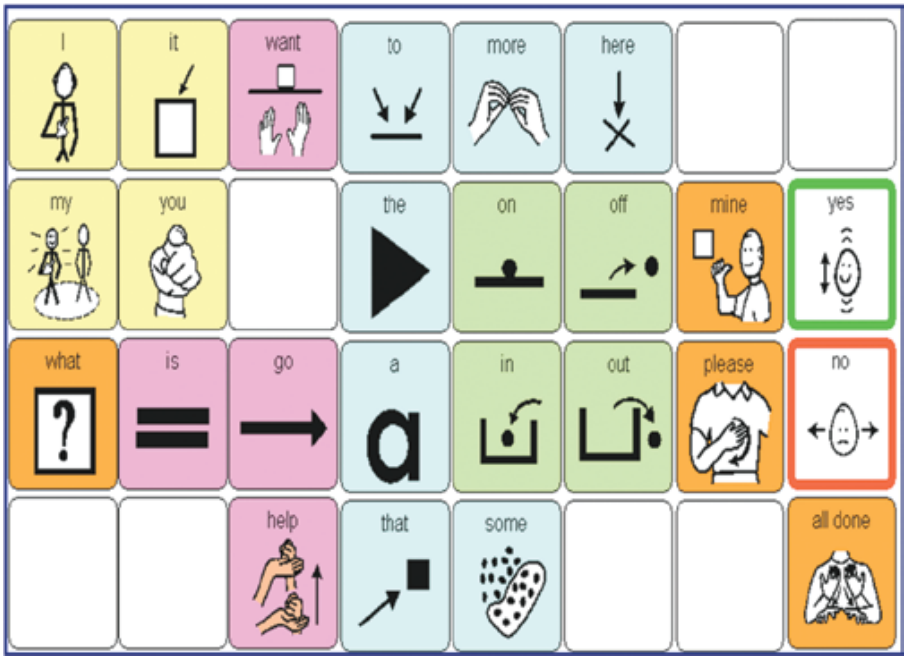

Photo 1 - Simplified color coded core display built on a template from theTech/Speak 32.

money. When words of this type comprise a significant number of the words available, our alternative communication users are unable to express a wider range of language functions.

When considering language usage, we want to be assured that our users will be able to express themselves meaningfully and to take advantage of language structures consistent with normal language usage. Roger Brown (Brown, 1973) identified stages of language acquisition that necessitate the availability of vocabulary that expands beyond simple noun usage. We need to expect our users to be able to comment, direct others, make requests, show possession, reject, and note cessation, along with a variety of other language functions. This is simply not possible when nouns dominate the vocabulary.

Of necessity, we must provide words that offer flexibility to express a wide range of communication functions while allowing our users to formulate spontaneous and novel utterances. Extensive research has shown that these words are relatively few in number. Studies of spoken language, whether elicited or spontaneously generated, have shown that the 100 most frequently spoken words in the English language can account for more than 60 percent of the total words communicated over the course of one's lifetime.

When the net is thrown wider to include a few hundred of these most commonly spoken words, speakers have the potential of saying as much as 80 percent of all the vocabulary that is needed for their communication purposes. Rather than the expected nouns, these specified words are made up of pronouns, determiners, adverbs, verbs, prepositions, conjunctions and articles.

Spoken language studies have also looked at age groups, such as toddlers, adolescents and adults, while other studies have focused on specific environments or the cognitive level of functioning of their subjects. Results remain the same. All studies reveal a consistent and high frequency use of a core vocabulary.

If we, as providers/facilitators/supporters of augmentative and alternative communication systems, provide our users with access to this core vocabulary, we will have gone a long way towards supporting the basis of effective and purposeful communication that will be relevant over the course of our users' lifetimes. When core vocabulary is limited or lacking, our AAC users' ability to express themselves will be sorely compromised.

APPLICATION

Based on this reservoir of research, we know that by utilizing this select core of vocabulary, we will provide our clients with opportunities to create functional, interactive and generative utterances. We also know that we will be providing the foundation for a vocabulary that will serve our users across environments and through adulthood.

As we, in our school district, embraced this research, we modified the way we provide and display vocabulary for our users. As a result, we believe we have made a direct and positive impact on the ability of our students to communicate at school, home and in the community. Each of the communication systems that we have provided also takes into account the individual needs of our students.

Our static core vocabulary displays can have as many as 32 to 64 cells, depending on our students' needs. (See photo one) There are a number of reasons that support the decision to include a larger quantity of cells than one might ordinarily consider.

Having more vocabulary than the user can reasonably be expected to use independently provides opportunities for the facilitator to model the use of new vocabulary. Routinely modeling new words or ones not yet in the users' expressive lexicon will facilitate the acquisition and use of new vocabulary. Incorporating new words into one's expressive language is dependent upon the ongoing exposure to use of that word by others. (See photo two)

When there are a larger number of cells on a display, some of the cells can remain empty. This intentional provision of empty spaces accommodates the future addition of words to the display. Previously, the frequent need to add additional words has necessitated the creation of new displays and a reformulation of where words are located on that display. If you initially start with more cells than are immediately needed, you can avoid the complication of having to create a new display. It also has the more important benefit of avoiding the need of a user to visually search for a known icon in a new location.

Another consideration for using a larger number of cells supports the permanent placement of vocabulary in designated locations. Taking advantage of motor planning provides an additional avenue for supporting effective and meaningful communication and is supported by neurological and motor learning principles.

When selecting vocabulary for communication displays, it is also helpful to be mindful of words that have multiple meanings. The

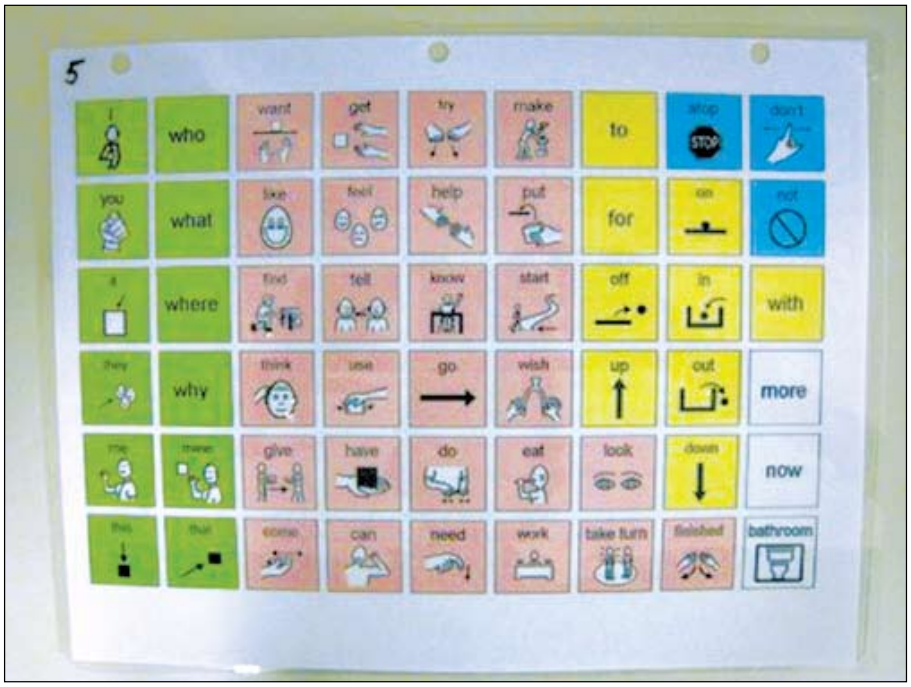

Photo 2 - Color coded Core vocabulary.

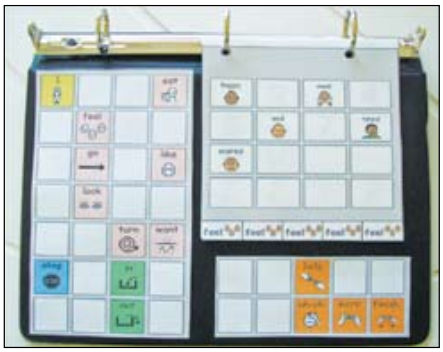

Photo 3 - Communication system combines both static Core vocabulary and low-tech dynamic display Core vocabulary.

meanings of these words are dependent upon the context of the communication exchange. For example, words like it, go, and turn can take on a number of different meanings. Once you include it, you can avoid the inclusion of a wide range of implicit nouns. The word turn can be used to express my turn, turn on, turn around, turn over and turn here, among others, and some examples of the use of go might include go away, go here, go on, I go and go for it.

OUR COMMUNICATION BOOKS

In our school district, we have developed a variety of styles of communication books that are based upon the consistent implementation of research-based vocabulary selection. These books showcase a core lexicon while they also provide readily accessible fringe vocabulary. Fringe words are those auxiliary words that are specific to a topic or situation. While important, they are used with less frequency than our core vocabulary. (See sample worksheet)

In our communication books, core vocabulary is consistently visible,while the fringe vocabulary pages may be flipped to access relevant topic words.(See photo two) Fringe pages accommodate words consisting of nouns, verbs and adjectives that are directly related to the topic or environment at hand. Spontaneous and novel utterance generation (S.N.U.G.) is supported when core vocabulary is used independently or in conjunction with fringe vocabulary.

The use of an existing format makes the development of new communication books easier for staff as well as families. In each format, we have developed a hierarchy of four levels of core vocabulary. The first level includes a limited number of core vocabulary words. Each subsequent level adds additional core vocabulary words to the display. This allows us a great deal of flexibility in determining a good starting point for each of our users, while still providing room for expansion. The ability to select from a predetermined set of words and a variety of preset communication displays allows even the novice to create a functional and interactive system. (Photos Three and Four)

CONCLUSION

Success can be enhanced if we "keep it real" in selecting vocabulary that represents the language of students' peers. We suggest a format that focuses on the language of typically developing peers to determine what vocabulary is needed for the client's communication system. Utilizing the language of a typical peer provides an avenue for developing a communication system facilitating the full range of language functions.

The next step toward successful integration involves immersing the environment in the alternative language system. The importance of modeling a language system is seen in the development of all children, regardless of their abilities. We automatically speak to the normally developing child, modeling all of the functions of communication as we talk to them. It is our expectation that by providing these children with a model, they too will learn to use speech to communicate. Unfortunately, for students who require an augmentative system, the adults in the environment typically use speech to communicate. The adults do not think to use the communication system that the child is expected to use. This puts our alternative communication users at a clear disadvantage. It is strongly recommended that family, peers and staff, among others in the environment, become versed in the alternative system, using it in conjunction with speech. This method has proven to facilitate the successful integration of the augmentative communication system.

Since we have integrated this process, we have seen a significant improvement in our students' ability to communicate efficiently and effectively while expressing a wide range of language functions.

Language of Typically Developing Peers	Core	Fringe
What page are we on?	what, on, we	page

Sample of a worksheet we use to help differentiate between core and fringe vocabulary.

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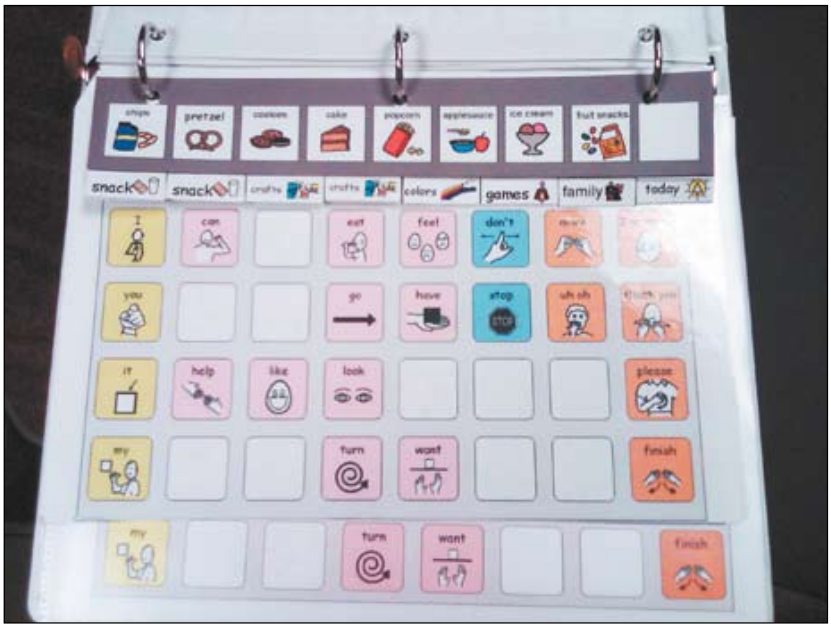

Photo 4 - Flip Fringe vocabulary located at the top of core disply.