Organizing Vocabulary for an AAC System

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Considerable knowledge, judgment, skill and time are required to design and produce communication aids "from scratch" (Porter, Tainsh, and Cameron, 2008).

Keep in mind the basic purposes of communication:

- To indirectly gain control over the environment.
- To regulate social encounters.
- To receive and convey information.

In this article, I will try to give an overview of the various ways of organizing vocabulary, the pros and cons of each, and how each might differ if done on a low tech system versus a touch screen system.

There are 3 basic philosophies behind organizing vocabulary: activity based organization, language based organization and spelling/word prediction. We will not talk much about spelling and word prediction in this article, since spelling and word prediction have their own organization present through the use of the alphabet.

Activity based organization occurs when words or phrases are grouped based on the situation (or activity) when they are expected to be used. For example, a young AAC user whose AAC system is being set up in an activity based organization would have an "eating" page with food names on it and phrases such as "all done" or "more". There would be a personal page, with her name and birthday on it. She also would have a "school" page, with greetings, choices about the weather and possibly the alphabet, colors, numbers and shapes. The school page may also contain names of items found in the classroom: books, art supplies, toys, etc. There might be a "going to the zoo" page, with animal names and the phrases "I want to see the…", "I'm tired", "I like…", "lets' go…" and a series of other pages related to the places the child might go or the activities the child might be doing.

In contrast, language based organization occurs when words or phrases are organized based on the way they might be used to build unique thoughts. In this type of organization, a child might have a main page with some phrases to start a conversation, some pronouns, some verbs and then some categories of items that would be used to direct them to another page (either automatically with touch screen devices or literally with a low tech communication book.)

We often see a combination of both of these plans. As an example, someone who uses AAC might have a page that contains greetings: "hi! How are you? I am fine. This is an activity based page that allows quick access to responses that are very predictable and don't change much. On the same AAC system, though, the user will most likely put together words that are organized in a language based way. Instead of opening a "what I did this weekend" activity, the person will likely choose single words that are stored in a more general way.

	Calm Down
	Sit on chair
	Feet on floor
	Fold hands
	Take 3 deep breaths
	Count to 10
	Good work

So, when does each way of organizing work best? Activity based organization works well when the conversation is very predictable and doesn't involve very much communication of the person's own ideas about life. When greeting someone, I can be pretty sure that a "hi" or Hello" will be followed by a "How are you?' I can also be pretty sure that I might need to introduce myself and to say "it's nice to meet you." to the other person. None of this conversation is communicating my own ideas about life, it's simply polite conversational give and take. Activity based organization works well for this.

Language based organization works very well for times when I am likely to have something new and different to say—when I want to communicate my own ideas about life. In the following example, please understand that I have 4 boys! What happens to be very interesting to my gang may seem slightly off-color to some of you. In any case, this actually happened to us, and it's a great example of how limiting a "zoo page" might be: consider yourself warned ?

rhinoceros	hippo
elephant	zebra
kangaroo	camel

One day when all of my boys were very young, we went to the zoo. I believe my oldest were 4 and 6 years old, which means the twins were about 2. At the zoo that day, the boys saw something which captured their imaginations for weeks to come. The "Mama Rhino" was going to the bathroom. As the boys watched her having her BM in public, the "Papa Rhino" came along and began to dig in it with his horn. Then the "Mama Rhino" urinated, and it went to the "Papa Rhino's' head! Everyone had their own

unique thoughts to express after this zoo trip! If the older boys had been using an activity based AAC system instead of speech, this unique situation would not have been an option for them. (Even I wouldn't have thought to program in bathroom words on a zoo activity page!)

If a language based approach to organizing words allows a child more flexibility to communicate their individual thoughts, then there is also a philosophical difference that takes place when we choose to use language based organization. The philosophy of a language based organization is that the child HAS unique thoughts to express and is capable of doing so, and that those unique thoughts are valuable. Sometimes, an activity based approach only is chosen for the set up of an AAC system solely based on the philosophy of the person who is setting it up. They select an activity based approach to AAC because they either DON"T believe that the child has unique thoughts to express, they believe that the child is NOT able to express unique thoughts using AAC, or they don't VALUE the expression of unique thoughts (it is "unnecessary" to our curriculum).

Now back to the practical end of things. You know that your child has plenty of unique thoughts to communicate, and you want to organize the AAC system so that he or she can get to the words needed to tell you those thoughts. But how do you do that?

Navigation

Why is having to navigate a concern? When a child has to navigate through the device to find the word he wants, at each navigation point he can lose track of what he is saying or forget where the words he wants is located. So he must remember longer what he was trying to say and must remember more steps to get there. In addition to this cognitive load, the physical act of navigating through the device slows down an already slow way of communicating. This can build frustration in a child who desperately wants to be understood right NOW!

Choosing the Words

A high frequency list like the Dolch list can be helpful in choosing those common sentence building words that we all use every day. Words like, "on", "off", with, under, good, "bad", "go", "do" make up some the most commonly used words in the English language. Your child will see these words in print, hear you say them and can use them to express his thoughts. As an example, Josh went to the local home improvement store and saw a really cool ceiling fan with cartoon characters on it.

Caleb didn't go to the store. When Josh got home, he told us all that he wanted a fan for his birthday. Caleb was not impressed! He couldn't understand why a fan would be a cool gift. So Josh tried to explain "cartoon fan" then "cartoon tv show fan". Still Caleb couldn't picture it. Finally Josh said "cartoon on fan". NOW it made sense to Caleb! The little word "on" was critical to getting the message across to his brother.

In addition to high frequency words, your child will need a selection of other words. Most of these will be names of things. Some of these will be words that everyone uses, and some will be special for your child. Names of family members, favorite foods, pets, tv shows and things in your house will be part of this list.

➔➔**Another very important word to consider for the AAC system is the word "not".** By using "not", you can really increase the number of things you can say. Not eat peas. Not play game. Not cold. Not go bed now. Not only does this little word increase the things you can say, it also increases your power to interact. Suddenly, "not" allows you to begin negotiating with your parents. "Not go bed now" is a great way to begin a conversation that is so typical of young children who speak. Lots of good interaction skills are learned when a child negotiates and finds out what can be changed using words and what is never going to change. For example, Mom may let me stay up to finish reading a story, but she is NOT going to let me ride in the car without my car seat. "Not" can be a scary thing to add to a device, if the people supporting the device do not respect the value of allowing the child to communicate his own thoughts. It can also be a wonderfully freeing word to add to the device, because it forever ends any perception of AAC as a compliance based skill and firmly cements your child's AAC system in the world of "real kid stuff". Real kids say not!

Grouping the Words

Now that you are armed with a list of words for the AAC system, how should they be grouped? One good (messy) way to visualize this is to write each word on a card and spread them all out on the floor. Slide the word cards into groups. Pull out a few really important words or sentence building phrases that should be by themselves on the main page of the AAC system. Put the others together into categories. Words that talk about "doing stuff" can be together. Words that tell where something is can go in the same group. Toys can go together. Whoops, the toys pile is getting too big. I'll break it into piles: books, stuffed animals and comfort items, general toys, and games.

As you move the cards around, re-group until you are pretty happy with the grouping. You will most likely end up with a few stray words. Think about these stray words.

Are they something that is part of a category that you'll need later on? For example, very early, we needed to add "telescope" to the boys' devices. Where to put it was a puzzle. My husband's telescope sits right in our house, so we could call it piece of furniture. Or, it could have to do with night time. As we thought about what else might belong with a telescope, we discovered that there were lots of other things you used with your eyes: cameras, magnifying glasses, binoculars, microscopes. We decided that "telescope" was just the first word of a new grouping of words we would call "things you use with your eyes", and stored it accordingly, leaving us a place to put the other words as they became important.

Now that you have categories piled on the floor, it's time to see if the number of categories you made is anything near the number of locations you decided on. If you have extra locations on your AAC system, that's wonderful! You can think about some sentence starting phrases to add. "I like", "do you like", "I can", "I want", "what's that?" or leave blank spots open for new words later on. If you have more categories than the number of location you chose, you will need to combine some of the categories. For example, some of those toys that we broke into separate groups may need to go back into one group, but we may keep the books separated.

Putting the Word Groups on the AAC System

Generally, English speakers may want to emphasize starting a sentence at the left and moving to the right, because this is an eye pattern that we use when reading. However, it's also important to consider what parts of the overlay are easiest to get to for your child. If you have a few blank spots, that's OK. Put them in the places that are hardest to reach. You can fill them later as the child's skills grow.

If you are using a touch screen device, you will program the main page of the AAC system with sentence starters and the names of the categories. When a child selects the name of the category, the page that lists the more specific items in that category will open up.

If you are using a mid tech and low tech AAC system with paper pages or overlays, the first page will contain sentence starters and maybe the names of the categories. Once a category is selected, the page that lists the more specific items in that category can be opened. Putting tabs on the side of a communication book is helpful, as is listing the page number or overlay to turn to on that category on the main page.

A sample of the main page of a 15 location of a communication book is included here. You'll notice that with only 15 locations, there wasn't room to include any of the categories on the main page, at all.
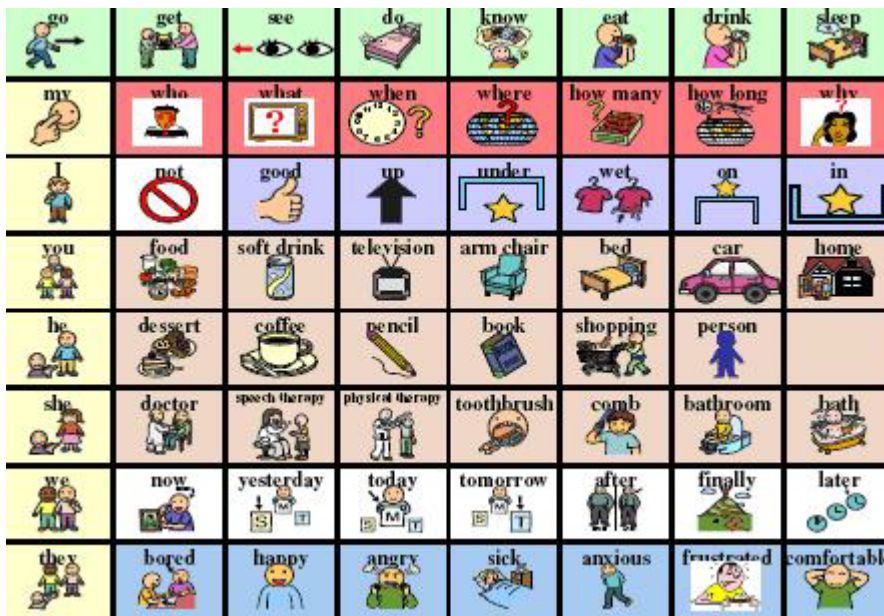
In this example of a 64 location board for an adult who had a stroke, basic sentence building words and many specific words that were important to her and her caregivers were included on one page. Notice how much more can be communicated when there are more locations to choose from.

I, me, my	go	home	shop	ooops
you, your	walk	group	kindergarten	
not	drive	playgroup	friend's house 9	go to categories C
want	to	park	McDonald's	turn the page

places   11

I want something. 10	something's wrong 4	I'm telling you something 5	I'm asking a question. 6	ooops
Let's go.... 11	I like this 3a	I'm telling a story 5	I've got a secret 5	
I have an idea 5	I don't like this 3b	Let's pretend 5	Do you want to hear a joke 30	go to categories 5 C
It's time to	I think it's 3	I want to show you something 2b	do a group activity 13	go back to page 1

page   2

I, me, my, mine	do	more	I'm asking a question **6**	I like this **2**
you, your	hurry, up	finish	I want ... **7**	I don't like this **3**
uh oh	wait, stop	help	let's go ... **8**	something's wrong **4**

page 1

not	something to eat or drink **7c**	blocks	book
want	toys	ball	someone **9**
play	hug	teddy bear	turn the page

want 7