

Chunking and Expressive Language Output

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Question 1: Does anyone have any advice on how to reduce a student's use of her AAC device to request one item only? I am trialing the (name of device) with a student who goes straight for 'I want cookies' every time she sees the device. (She is independent with this and has the potential to use the device to request other items.) I recently deactivated the button, but she continues to attempt to navigate to the location. I have not given her any cookies for the last (at least) 20 trials. I don't know what else I can do to break this habit!

Question 2: I provided some core word training in regards to a 7 year-old girl with Autism. She hasn't had an expressive language assessment, but based on observations and feedback she will say, "I want help please." Her mom says this is "chunking" and she sometimes uses the sentence inappropriately. Any advice will be helpful.

Issue: Chunking

Many times, children who use AAC systems get caught up in the pattern of saying mostly "I want" phrases or even say, "I want" in front of everything they are saying. While there are many factors that contribute to this, it appears that these repeated phrases are "chunks" and act as a single word and/or motor pattern, rather than meaningful individual words that are put together intentionally.

What is chunking and how do speaking people "chunk" when talking? FYI: The three paragraphs below are notes gathered from various resources.

Ritualized communication, like greeting someone (Hi - how are you) or, in the case of children with ASD (I want) are full of canned phrases that we learn to perform with rote precision at an early age. The use of these phrases/chunks by a normal language learner is helping them get a handle on the pragmatics of real-life interactions. The abstract rules of syntax and morphology are secondary.

The field of language acquisition and instruction has investigated the process of "chunking". Chunking is a way that children learn language not so much on a word-by-word basis, but in larger "lexical chunks" or meaningful strings of words that are committed to memory. Chunks may consist of fixed idioms or conventional speech routines, but they can also simply be combinations of words that appear together frequently, in patterns that are known as "collocations." In the 1960s, the linguist Michael Halliday pointed out that we tend to talk of "strong tea" instead of "powerful tea," even though the phrases make equal sense. Rain, on the other hand, is much more likely to be described as "heavy" than "strong."

A native speaker picks up thousands of chunks like "heavy rain" or "make yourself at home" in childhood, and psycholinguistic research suggests that these phrases are stored and processed in the brain as individual units. The University of Nottingham linguist Norbert Schmitt has explained that it is much less taxing cognitively to have a set of ready-made lexical chunks at our disposal than to have to work through all the possibilities of word selection and sequencing every time we open our mouths. However, competent speakers are

Chunking and Expressive Language Output

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not talking to each other using only ready-made lexical chunks. Competent communicators have the ability to select any word at any time and combine it with a variety of other words.

If we think of a "chunk" like "I want" or "I want cookies" or "I want help please," I think we have several options to explore in trying to move along the path of further language development for a child who uses AAC.

1. **After the child says the chunk:** Take individual words from within the chunk, reflect them back and then model use of them in different pragmatic contexts. Model ADDITIONAL words verbally and with AAC system, adding 1 or 2 additional words. (Words in quotes are modeled on the AAC system.)
 - a. Example 1:
 - i. Child says: "I want help please" as a chunk. (pragmatic function - request assistance)
 - ii. Adult - Reflect Back: You asked for "help" because "you" could "not" "do" it yourself. (This helps confirm the pragmatic function - request for assistance)
 - iii. Adult - Respond: "I" will "help" you because "I" can "do" it. (New pragmatic functions - give information, direct action, comment)
 - b. Example 2:
 - i. Child says, "I want cookies" as a chunk. (pragmatic function - request object)
 - ii. Adult - Reflect Back: It's snack time so you said you "wanted" cookies. (Confirms pragmatic function - request for object) OR I know you "want" cookies, but it is "not" snack time "now."
 - iii. Adult - Respond: "Here" is "what" you "want." OR Sorry, you have to "wait" until snack time to "get" what you "want."
2. **In other conversational contexts:** Model individual words from the chunk in different communication contexts to model new pragmatic functions and new individual words to help the student work through the process of selecting words and sequencing words into new syntactical combinations.
 - i. help = provide things the student CAN do without assistance and model "not" "need" "help", have the student assist someone else (e.g., pushing a friend on a swing) and say "I" "help" "you"
 - ii. want = combine "want" with variety of other words to expand requesting beyond a familiar/preferred item
3. **When a child is stuck on "I want" + familiar/preferred item:**
 - a. Variation 1: Model a replacement word for the familiar/preferred item (e.g., cookies) with generic words (that, some, all).
 - b. Variation 2: Engineer the activity to create opportunities to model alternative words and for the child to say other words for other communication

Chunking and Expressive Language Output

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functions. Engineering examples include:

- i. more - give only a little amount
- ii. different - give the wrong thing
- iii. help - create a barrier so the child to prevent child from getting the object (e.g., put cookie in a clear box and give the box to the child. Possible words to model include more than just "help", but also get, out, you, do, wrong, etc.)

- c. Variation 3: When a child is stuck on "want + familiar/preferred item"
4. **Replace "I want + familiar/preferred item with "Can I have that?":** Dr. Tracy Kovach, a highly regarded speech-language pathologist who specializes in AAC, has expressed that the use of "I want" often serves the function of a comment rather than a request because it has been taught as a request. However, typically developing children would more likely say, "Can I have cookies" as a request vs. "I want cookies." You don't hear typically developing children over-using "I want," but you do hear them frequently repeating "can I" - much to the dismay of their parents. Typically developing children don't use "I want" unless they are asked/prompted to "tell me what you want" or "what do you want" by adults. Dr. Kovach will try to teach "can I" vs. "I want" AND try to prompt children to "ask me if you have a question or want something". Not only does the use of "I want" encourage the use of noun vocabulary, but modeling "can I have this" or "that" is sometimes easier for the child as it offers a choice for children vs. having to come up with the noun, etc. on their own.

Responses from AAC Colleagues:

1. *Don't de-activate the button, rather teach her when it is appropriate to ask for cookies. Explain when it is and is not time for cookies and model appropriate messages for the context of your current activity.*
2. *Hide the picture electronically but only temporarily during a session to help in breaking the motor pattern.*
3. *Re-teach the motor pattern:* It may be that the child can use the device to make varied requests, but maybe always starts out with "I want cookies" because of a learned motor pattern. Consider "re-teaching" the motor pattern -- leave the device programmed as-is, without blocking or hiding the "cookies" button. Reteach the motor pattern by supporting the child's intent in a reciprocal activity (i.e., a game or activity the student likes to play or engage in with another person that has a back and forth/reciprocal component --- singing lyrics to a song, playing a board game, etc.). Start off with the typical pattern (asking for cookies), then saying the other intent/other message (i.e., make the music louder). Acknowledge that there are no cookies available while you act as per the message she relayed after the rote message was activated (you turn up the music). Once you can understand the message the child is going to respond with in that back and forth game, you can show the child how to initiate that communication without composing "I want cookies" first. As needed, support the child by guiding her hand to her supposed "true intent" so she

Chunking and Expressive Language Output

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does not activate the "I want cookies." If you can (1) break the motor pattern and the child (2) experiences successful communications more quickly when bypassing that rote message, she may stop using the rote "I want cookies" pattern in other communication situations.

4. *Use what motivates her (asking for cookies) and use it to expand her repertoire and length of utterances.* You could actually pair it with number so she has to hit 2 or 3 buttons - to get 1, 2 or even 3 pieces of a cookie! (I want...3 pieces...cookie) You could use it in a play routine with a doll/monster/puppet - feed the doll/monster/puppet a cookie or find the lost cookie or play 'who took my cookie?' with a series of questions to ask to gather clues about which doll or person took her cookie. Instead of Where's Waldo - play 'Where's the cookie' and take turns hiding the cookie and asking and responding to Yes/No questions. You could combine it with 'Lets sing... a cookie.... song' or perhaps 'Lets watch... a cookie... video.' You could add a series of buttons for a recipe that will lead to the making and eating of a homemade cookie try adding some funny comments for her to say during the baking to develop sense of humor! Later, after she gets the idea that she will always be able to talk about cookies, and you have spent time discovering other motivating things she'd like to talk about, you could use a paper visual schedule with other topics to show her: first we have to do this, then this, and then we can talk about cookies again! You may have to pair this with a visual reward system so when she completes two other topics/activities then she sees its time to talk cookies again! Eventually, she will find another motivator to talk about and the cookies will lose their luster!
5. Use a First/Then board or a visual sequence strip where they can see that the wanted item is coming, but that they have to finish another task to get to it first. It's a way to make the flow of activities more concrete.
6. *Find alternative motivators (e.g., bubbles, music, drinks) by doing a preference assessment.* What happens when you have an equally reinforcing item available? Give it to the child free 1 or 2 times. Make it available enough so she can reach for it. That way you know they really want it. Then when she asks for cookies you can say I don't have it but I have x. If the child reaches for it and is communicative give it and show each time the icon for that item. Do that last trial another time, if he child reaches it again prompt " tell me I want x" and maybe accept if child selects that icon with visual prompts only. Replace with nonfood items if possible. And moving forward I would be sure to vary the reinforcing items among the trials. So I don't think I would use exact same reinforcer in multiple trials. Just in case it's a factor of "getting stuck" and not just this kid absolutely loves cookies.
7. Try reverse chaining. What does she want BEFORE the cookies? Put the cookies in a Toy car and show her how to request driving the car toward her. Then request cookie. Put the cookies behind several other toys. Be sure she watches. Show her how to request moving the toys to look for the cookie. When she is successful with that hide the cookies without her watching to know where.
8. Go with CORE WORDS instead of a prestored request sentence. Even consider combining a speech generating device (SGD) or App with a low tech/no tech system. For example, use the words "I" and "want" on a SGD/App and use low tech of the student's extended, noun vocabulary.

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9. Explore intervention strategies that require more of an exchange with an oral speaker. When the student says “I want cookies” – she says it, she gets a cookie, and she is done talking. For interactive activities, such as games (e.g., Mother May I, Twister) encourages ongoing interaction. Save use of “I want cookies” as the reward for the end of the learning activity. After playing the game, everyone can enjoy a cookie together.
10. Explore further strategies discussed at the following websites:
<https://sites.google.com/site/practicalaac/> and <http://aackids.psu.edu/index.php/page/show/id/1>