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But Does She *Understand*?

Choosing the Right Visual Symbols

The use of visual symbols has greatly improved the ability of many individuals to understand and communicate with the world around them, from understanding what will happen next, to making choices and communicating wants and needs. Visual systems are valuable tools that are being used more and more in classrooms and the community.

There are a number of factors that need to be considered when setting up a communication system. This is true whether you are setting up the first system for a child, or looking to upgrade or make changes to an existing system. The first consideration is the individual's current abilities in both expressive and receptive communication, as well as any sensory or perceptual limitations that might impact the individual's ability to see and understand visual symbols. Motor skills also need to be considered to determine what type of visual system

the individual could best access. Can he point to symbols, operate a switch, pick up a picture card, use a keyboard, etc.?

Next, each of the individual's daily environments needs to be studied to determine what communication opportunities exist in each setting. What would others like to be able to communicate to the individual and what would she like to communicate to them?

The third consideration is what type of symbol will be used. Choosing the right type of symbol is as important as other considerations, but is sometimes not given adequate attention. Too often, the decision to use a visual system is simply interpreted to mean using small cards with generic line drawings on them, without first determining if the individual understands what those drawings mean. The aim is to select symbols that are readily understood, not ones you think the individual is capable of learning. Of course, there are going to be symbols within any symbol system that will not be immediately recognized and will need to

be taught, such as symbols representing concepts or new locations and experiences. But beginning with recognizable symbols that represent actual objects is the best way to avoid frustration and ensure that the individual will see the value of using a visual system.

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”

LEVELS OF REPRESENTATION

There are many different types of symbols, some more readily understood than others. It's necessary to assess, and not just guess, the individual's level of understanding. It may seem that he is recognizing a certain type of symbol, when in reality, he is reading other clues in the environment, or has a routine memorized. Before you begin an assessment, however, it's important to understand what the choices are when it comes to symbols. Below is a description of the different types of symbols, from the most concrete to the most abstract, as described in *Teaching Communication Skills to Children with Autism* (Crissey, 2009).

Objects

- Actual object used - such as the cup the child uses to drink juice.
- Identical objects - items that are identical to the actual item used. These may be presented glued to a card or in a clear container, such as fish crackers in a clear plastic container (see image 1).
- Similar object - a cup that is similar to the actual cup used.
- Part of an object - such as a part of a toy (see image 2).
- Miniature object - such as a doll cup. Caution is necessary when using miniature objects because recognizing the relationship between a miniature object and the full-sized version requires relatively advanced cognitive skills. For most individuals who use object symbols, the miniature and real object need to be fairly similar in structure and size. A child may not see any relationship between a toy school bus he holds in his hand and the actual school bus.
- Associated object - an item that is placed so it will be identified with a specific activity, such as a foam ball attached to the door of the sensory room. An identical foam ball would be used to indicate that it is time to go to the sensory room (see image 3).

Realistic Two-dimensional

- Actual part of packaging or a picture from a container (see image 4).
- Photo of actual object - photos need to be a close-up shot of the item with a neutral background (see image 5). Photos of similar objects – if an individual is able to understand these, he can usually understand line drawings as well.

Line Drawings, Picture Communication Symbols

- Such as Boardmaker™ or PECS™ symbols.

Words - written and verbal

Image 1 - Identical objects.



Image 2 - Part of an object.



Image 3 - Associated object.



Image 4 - Part of packaging.



Image 5 - Photo of actual object.



ADDITIONAL CONSIDERATIONS

Whatever type of symbol is used, it should focus on what is meaningful to the individual. What does she see or touch when engaging in the activity that the symbol represents? For example, a seatbelt buckle could be a symbol representing riding on a bus or in a car since the individual is likely seeing or touching it each time she goes for a ride. When using a two-dimensional symbol, focus on what the person is seeing, and use a close-up picture (see image 6).

When first starting to use a visual system, it's best to begin with easily recognizable objects or pictures that represent actual objects and activities (such as a cup to represent drinking juice). However, at some point you will want to use symbols to represent concepts, locations or activities that don't involve a specific type of object. In these cases, it's necessary to build an association between a symbol and what it represents by repeatedly pairing the two, such as the example above of the two foam balls. An association is built by having the individual look at and touch the foam ball on the door immediately before beginning sensory activities.

Once it has been determined that the individual is ready for two-dimensional symbols, it's also important to include, as part of the assessment, the size and number of symbols presented. Though an individual may not have any type of visual impairment, he may still have difficulty focusing on or understanding a photo or line drawing that is too small. During the assessment, a quick check can determine the optimal symbol size to begin with.

Individuals may also become confused if too many symbols are presented at one time. Symbols can be presented one at a time, and it may be necessary to start this way, but this is a very limited type of communication system. It's best to present multiple symbols in one display as soon as possible. This will enable the communicator to make choices, express his wants and needs and to understand sequencing of events. How many symbols to start with can also be quickly determined during the symbol assessment.

INFORMAL SYMBOL ASSESSMENT

A simple symbol assessment can be used to determine the best type of symbols to use. The following is a summary of a symbol assessment described in detail in Teaching Communication Skills to Children with Autism (Crissey, 2009).



Image 6 - Focus on what the person is seeing.

Symbol Recognition Assessment		name <u>Danny</u>					
Pre-assessment Points to or gives symbol <i>use realistic photos</i>	9/1	0	0	+	+	+	+
	+	<i>met criteria</i>					
Step 1 Chooses object symbol <i>(skip)</i>							
Step 2 Chooses photo symbol	9/5	0	+	+	0	+	+
	+	+	+	<i>met criteria</i>			
Step 3 Chooses line drawing symbol	9/8	+	0	0	+	0	9/10
	0	0	<i>discontinued</i>				
Step 4 Symbol size	3x3 9/9	+	+	+	+	+	
		<i>met criteria</i>					
	2x2 9/9	+	0	+	+	0	0
	0	<i>discontinued</i>					
Step 5 Chooses from multiple symbols	3 symbols 9/10	+	+	+	+	+	
		<i>met criteria</i>					
	4 symbols 9/10	+	0	+	+	0	
		0	+	0	<i>discontinued</i>		
	5 symbols						

Date 9/10
 Type of symbol realistic photos Size 3x3 # of symbols 3

Image 7 - Example of an assessment form. Reprinted by permission from Teaching Communication Skills to Children with Autism. See references.

Before You Begin

Gather together the items you will need for the assessment (objects, photos and picture symbols). If the individual seems to recognize photos or pictures from books or on TV, begin the assessment using realistic photos. If unsure, begin with objects. An example of an assessment form is shown in image 7.

If you will be doing assessments on a regular basis, it can be handy to put together a symbol assessment kit with the necessary items. This can save a great deal of time. See an example of what could go into a symbol assessment kit, image 8.

Pre-assessment Training

Begin with teaching the individual to hand you a symbol (object or photo) in order to gain a desired item. Have the desired item where the individual can see it, but not grab it. Present one symbol representing the item (such as crackers in a clear plastic case), directly in front of the person and prompt him (physically prompting if needed) to point to or hand you the symbol, then immediately give him the desired object (goldfish crackers). Repeat using different symbols and items until the individual independently points to or hands you the symbol. At this point, you are only concerned that the individual understands that pointing to or handing a symbol will get them the goodies.

Step One

To assess the individual's ability to use object symbols, have a desired item in clear view, but out of reach. This time you will present a symbol representing that item (i.e. the plastic case with goldfish crackers) and one distractor (for example, a plastic case with a blank card in it). Repeat with different symbols and distractors.

Step Two

Repeat the process in Step One using a photo of the desired item and one distractor photo.

Step Three

Repeat the process using line drawing symbols, beginning with symbols sized 3"x3". If the individual is unsuccessful, try using larger symbols. If the individual is repeatedly successful with 3"x3" symbols, try 2"x2" symbols.

Step Four

Once you have determined the type of two-dimensional symbol best for the individual (photos, 3" x 3" line drawings, or 2" x 2" line drawings) present that symbol for a desired object along with two distractor symbols. Repeat, alternating the positions of the picture symbols, so the correct symbol is not always on top or to the right, etc. If the individual is able to consistently choose the right symbol, repeat the process using three distractors, then four, then five, etc. If the individual is able to consistently find the correct symbol from a display of six or seven symbols, he is probably ready for a beginning communication board or device.

JUST THE BEGINNING

Once you have determined what type of symbols will work best, and how many should be displayed at one time, you're off to a great start, but there is still a lot to consider. What is the best way to present these symbols and how will the individual use them to communicate? How will you determine if the system is working and when it needs to be updated or expanded? Choosing the right type of symbols is only the beginning, but it is a crucial step to ensure success. A mismatch between symbols and communicator

OBJECT SYMBOLS

Actual items:..... Object symbol for desired items:

- | | |
|--------------------------|--|
| 1. crackers..... | 1. cassette box with crackers |
| 2. juice carton..... | 2. empty juice carton attached to backing |
| 3. play dough..... | 3. small piece of play dough attached to backing |
| 4. candies..... | 4. candies taped on card stock |
| 5. Slinky..... | 5. Slinky attached to backing |
| 6. inflated balloon..... | 6. slightly inflated balloon attached to backing |

Realistic photos of:..... Line drawing symbol of:

- | | |
|--------------------------|---------------------|
| 1. crackers..... | 1. crackers |
| 2. juice carton..... | 2. juice carton |
| 3. play dough..... | 3. play dough |
| 4. candy..... | 4. candy |
| 5. Slinky..... | 5. Slinky |
| 6. inflated balloon..... | 6. inflated balloon |

DISTRACTOR ITEMS

Actual item:..... Object symbol for distractor:

- | | |
|-----------------------------|--|
| 1. piece of card stock..... | 1. cassette box with piece of card stock in it |
| 2. Styrofoam tray..... | 2. piece of Styrofoam tray glued on backing |
| 3. celery..... | 3. piece of celery taped on card stock |
| 4. sock..... | 4. small sock in clear plastic container |
| 5. small box..... | 5. small box attached to backing |
| 6. poker chip..... | 6. cassette box with poker chip in it |

Realistic photos of:..... Line drawing symbols of:

- | | |
|-----------------------------|------------------------|
| 1. piece of card stock..... | 1. piece of card stock |
| 2. Styrofoam tray..... | 2. Styrofoam tray |
| 3. celery..... | 3. celery |
| 4. sock..... | 4. sock |
| 5. small box..... | 5. small box |
| 6. poker chip..... | 6. poker chip |

Image 8 - The above is an example of the type of items that could make up a symbol assessment kit. Six items in each category would be the minimum number needed. Having more items would allow for greater choice.

will be frustrating for the individual and for everyone who wishes to communicate with him. Starting with symbols that are easily recognized will enable the communicator to see the power and joy of communication and will lay a foundation for better, more meaningful communication to come.

REFERENCES:

Crissey, P. (2009) Teaching Communication Skills to Children with Autism. Attainment Company, Inc., Printed book - \$39.00, eBook - \$19.00. <http://attainmentcompany.com> 800-327-4269, fax 800-942-3865. ■