Teaching Verbal Behavior in the Classroom: An Overview

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Adapted from the workshop manual Introduction to Verbal Behavior developed by Vincent J Carbone, Ed.D., BCBA. The methods described herein have been empirically verified and are mostly published in the Journal of Applied Behavior Analysis and The Analysis of Verbal Behavior. Many of the verbal behavior teaching methods can be found in the published research of Drs. Sundberg and Partington (1998) and included in their book Teaching Language to Children with Autism and Other Developmental Disabilities. Their work and the teachings of Dr. Jack Michael provide the basis for this presentation.
1. A word is not defined by its form. The definition of a word is determined by its functional category, e.g. mand, tact, etc.

2. The same word (candy) has many different meanings based upon the conditions under which you learned to say it.

3. Many children with autism do not have verbal repertoires that include responses in each of the categories for the same word (topography).

4. This happens because the categories are functionally independent and the responses (words) may not transfer across the categories without explicit training. For example, being able to mand a cookie by saying "cookie" does not guarantee that the same child will be able to tact (label) a cookie when the see one and there is no EO (motivation) for it.

5. A common profile of children with autism includes a large receptive repertoire, many tacts, and very few mands and almost no intraverbals. Failing to have responses in all of the categories leads to less than adequate and useful verbal repertoire.

6. This problem may be the result of instruction which failed to assess the language repertoire of the child according to the behavioral classification and then failed to recognize the need for explicit teaching. Usually the child's "cognitive abilities" and not the teaching is said to account for failure to develop spontaneous language and conversational skills.
MAND TRAINING

1. Manding is verbal behavior that produces immediate benefit for the learner and therefore strengthens it.

2. Development of a strong manding repertoire may be essential for the development of all other types of verbal behavior, e.g. tacting, intraverbal, etc.

3. Manding teaches a learner that verbal behavior is valuable; the other repertoires teach what to say once the learner “wants to talk”.

4. This is the first repertoire learned by all children, e.g. children cry when they are hungry and as a result they receive food. Eventually the child learns to say words to ask for different things which are reinforcing.

5. By teaching a mand repertoire you may replace many problem behaviors.

6. It is unlikely that you will be able to develop a verbal behavior repertoire in an early learner by just requiring the child to label items or talk about things.

7. It is imperative that you begin teaching the child to ask for his or her strongest reinforcers.

In addition, teach mands at times when the motivation is the greatest for the item or activity. These times will change from moment to moment, day to day, week to week, etc. so it will be important to be flexible so that you teach manding at a time when the motivation is greatest.
RULES FOR TEACHING MANDING

1. Teaching must occur in the natural and everyday environment where the motivation is typically strong.

2. Capture and contrive as many opportunities per day to teach mands. Set a goal of hundreds of mands per day across many reinforcers, teachers and settings for early learners.

3. Count the number of mands, prompted and unprompted, per day and graph your results.

4. Prompt the mands initially to teach the child that it is easy to get things with verbal behavior and so as to not turn the child off to communicating by requiring a difficult response at first.

5. Get the best quality response with the least amount of prompting.

6. Practice teaching mands so that your are skilled in how and when to reinforce, what approximations to accept, what level of prompt to provide and how to fade the prompts as quickly as possible.

7. Consistency in methods across trainers is essential and lots of opportunities for generalization.

8. An orderly and progressive curriculum must be in place.
CRITERIA FOR CHOOSING AN AUGMENTATIVE SYSTEM

1. EASE OF ACQUISITION FOR THE LEARNER: Choose the system that is easiest for the child to learn, requires the least response effort for the child and is acquired the fastest to insure the immediate replacement of maladaptive behavior with functional communication.

2. DEVELOPMENT OF VOCALIZATIONS: Choose the system that is most likely to facilitate the development of vocal behavior (talking).

3. FULL LINGUISTIC SYSTEM: Choose the system that allows for verbal behavior across all the meanings of words, e.g. mands, tacts, intraverbals, just in case the child does not develop vocal behavior as his/her sole form of communication.

WHAT WE KNOW ABOUT SIGN LANGUAGE WITH CHILDREN WITH AUTISM

1. There is convincing evidence that sign language acquisition with spoken words accompanying sign (total communication) may lead to vocalizations with some children. Children who already possess some vocal imitation skill are more likely to develop vocal verbal behavior as a result of sign language acquisition.

2. Almost all children with autism can learn to sign despite motor imitation difficulties.

3. Sign language teaching may lead to improved vocal verbal behavior in children who are vocal but engage in frequent delayed echolalia or video-type scripting or for whom the development of more abstract verbal behavior, e.g. adjectives, prepositions, etc. are difficult to acquire.

4. Sign language as a form of verbal behavior appears to mediate receptive understanding

For a complete review of selection-based and topography-based verbal behavior see:


BASIC TEACHING TEMPLATE

MAND (SR+) ➔ FUNCTIONAL SKILLS ➔ MAND (SR+)

EARLY LEARNER

MAND (SR+) ➔ FUNCTIONAL SKILLS ➔ MAND (SR+)

COOPERATION (PAIRING)
MOTOR IMITATION
RECEPTIVE SKILLS
MTS
ECHOIC SKILLS

(HIGH RATE OF SR+ & ERRORLESS TEACHING & MIX EASY AND EFFORTLESS RESPONSES INITIALLY & THEN GRADUALLY INCREASE NUMBER OF RESPONSES)

INTERMEDIATE LEARNER

MAND (SR+) ➔ FUNCTIONAL SKILLS ➔ MAND (SR+)

MOTOR IMITATION
RECEPTIVE SKILLS
MTS
ECHOIC SKILLS
TACTS
INTRAVERBALS

(HIGH RATE OF SR+ & ERRORLESS TEACHING & MIX RESPONSES & GRADUALLY INCREASE NUMBER AND COMPLEXITY OF RESPONSES)

ADVANCED LEARNER

MAND (SR+) ➔ FUNCTIONAL SKILLS ➔ MAND (SR+)

MOTOR IMITATION
RECEPTIVE SKILLS
MTS
TACTS
INTRAVERBALS
ACADEMIC SKILLS

(MIX RESPONSES & GRADUALLY INCREASE NUMBER AND COMPLEXITY OF RESPONSES)
1. **PAIR TEACHING ENVIRONMENTS WITH REINFORCEMENT AND USE COMPETING REINFORCERS.** Initially, correlate the teaching environment with highly valuable and high-density reinforcement relative to the conditions that have typically been interrupted at the start of teaching sessions. (Lalli, Vollmer, Progar, Wright, Borrero, Daniel, Barthold, Tocco and May, 1999; Michael, 1993, De Leon et al. 2001; Piazza, et al 1997, Lalli and Casey, 1996; Harding, et al, 1999; Fisher and Mazur, 1997.

2. **MIX AND VARY INSTRUCTIONAL DEMANDS.** Presenting instructional demands in which the stimuli and response requirements vary from trial to trial appear to reduce the value of escape as a reinforcer compared to massed trailing and constant task presentation. (Dunlap and Koegel; 1984; Winterling, Dunlap and O’Neil; Dunlap, 1984)

3. **REDUCE LEARNER ERRORS.** Reduce student errors through teaching methods that insure high levels of correct responding. These procedures will lower the value of escape-established reinforcement and will insure that instructional demands are correlated with an improving of conditions (correlation with high density and short delays to reinforcement) relative to a worsening of conditions (low density and long delays to reinforcement) that results from frequent errors. (Terrace, 1963; Sidman and Stoddard, 1966; Sailor, Guess, Rutherford, and Baer (1968); Reese, Howard and Rosenberger, 1977; Etzel and LeBlanc, 1979; Allman, Hobbs, Roberts and Haavik, 1980; Carr, Newsom and Binkoff, 1980; Weeks and Gaylord-Ross, 1981; Touchette and Howard, 1984; Carr and Durand, 1985; Lancioni and Smeets, 1986; Woolery, Bailey and Sugai, 1988; Durand, 1990; Horner and Day, 1991; Woolery, Ault and Doyle, 1992; Cameron, Luiselli, McGrath and Carlton, 1992; Cameron, Ainsleigh and Bird, 1992; Sprague and Horner, 1992; Heckman, Alber, Hooper and Heward, 1998; Smith and Iwata, 1997; Woolery, Ault and Doyle, 1992.)

4. **INTERSPERSE EASY AND DIFFICULT DEMANDS.** Interspersing “easy” tasks which result in correct responding and therefore are correlated with a higher density of reinforcement (easy tasks) with relatively more “difficult” tasks will reduce problem behavior by reducing the value of escape as a reinforcer. (Singer, Singer and Horner, 1987; Mace, Hock, Lalli, West, Belfiore, Pinter & Brown, D. F. (1988). Mace and Belfiore, 1990; Harchick and Putzier, 1990; Horner, Day, Sprague, O’Brien and Healthfield, 1991; Zarcone, Iwata, Hughes and Vollmer, 1993)

5. **FADE IN NUMBER OF DEMANDS.** Present low frequency demands at first and fade in greater and greater response ratio requirements. Deliver extinction for problem behavior that occurs when the EO was not manipulated precisely so as to “abolish” problem behavior. (Weld & Evans, 1990; Pace, Iwata, Cowdery, Andree, and McIntyre, 1993; Zaracon, Iwata, Vollmer, Jagtiani, Smith, and Mazaleski, 1993; Zarcone, Iwata, Smith, Mazaleski and Lerman, 1994; Pace, Ivanic and Jefferson, 1994; Piazza, Moes and Fisher, 1996)
6. **FADE IN EFFORT/DIFFICULTY OF TASKS.** Insuring that the response being taught is the most efficient will reduce the shift in the value of reinforcement toward escape and evoke problem behavior. (Wacker, Steege, Northup, Sasso, Berg, Reimers, Cooper, Cigrand and Donn, 1990; Iwata, Smith and Michael, Horner and Day, 1991; Weld and Evans, 1990; Richman, Wacker and Winborn, 2001)

7. **PACE INSTRUCTION PROPERLY.** Instruction which is delivered in a fast pace manner (short inter-trial intervals; ITI) can reduce problem behavior and student errors by lowering the value of escape as a reinforcer relative to the same demands when presented slowly. An important caveat is that this escape-abolishing effect may be achieved only when errorless teaching methods of the type recommended above are employed and the gradually increasing number of easy demands before reinforcement (VR schedule) are delivered in a backward chain format that gradually increases the number of responses and therefore delay to reinforcement. (Carnine, 1976; Weeks and Gaylord-Ross, 1981; Carnine and Engelmann, 1982; Dunlap, Dyer and Koegel, 1983; West and Sloane, 1986; Cameron, Luiselli, McGrath and Carlton, 1992; Zanoll, Daggett, and Pestine, 1995)

8. **TEACH TO FLUENCY.** Teaching skills to fluency (correct and quick) as opposed to just correct decreases the value of escape as a reinforcer relative to other reinforcers available for non-fluent responding. It appears that students who learn to respond quickly and accurately and not just accurately tend to exhibit greater endurance for longer duration sessions without problem behavior. (Binder, 1982; 1984; 1990; 1996)
References