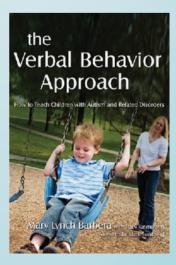


BY MARY LYNCH BARBERA, RN, MSN, BCBA

Mary Lynch Barbera, RN, MSN, BCBA offers a unique perspective as both a parent of a child with autism, as well as a professional. Since her son's diagnosis one day before his third birthday, Mary has focused her attention and research on autism and related disorders. She became a Board Certified Behavior Analyst in 2003 and has since been working as the Lead Behavior Analyst for the Pennsylvania Verbal Behavior Project. For more information go to: www.vbapproach.com



Getting Started with the Verbal **Behavior** Approach

Henry's Story

Henry T. will be four years old next month and was diagnosed with Autism Spectrum Disorder (ASD) six months ago. He attends an afternoon preschool program for children with autism four days per week and also receives speech and occupational therapy at school. Henry's mom reports that he can ask for several food items and drinks if they are in sight and even says whole sentences on occasion such as, "I want to go home," or "I can't open it." But Mrs. T. also states that she can't get Henry to talk; he will label things only if he wants to and won't repeat any words or answer any questions. Henry also has trouble imitating motor actions and usually fails to comply with receptive directions such as "go get your shoes," or "touch your head." Not surprisingly, Henry often tantrums if adults try to get him to sit and learn any skills.

Mrs. T is like many parents with children on the autism spectrum. She knows her son has so much to learn, yet she has no idea where to begin or how to encourage learning without causing her son to display problem behaviors. The good news is that Henry does talk and at times his language is fairly complex. But whether or not your child is talking, the same procedures can be used to gain compliance and to get your child communicating and learning more skills!



Henry and Mary: "Up, up, up!"

The Verbal Behavior Approach

I wrote a book titled The Verbal Behavior Approach: How to Teach Children with Autism and Related Disorders (Barbera & Rasmussen, 2007) to help parents like Mrs. T., as well as professionals who are new to this approach. The book is written from my perspective both as a parent of a son with autism and as a Board Certified Behavior Analyst (BCBA). While a small part of my book focuses on my story, the majority of the book gives parents and professionals a step-by-step guide to getting started with a Verbal Behavior (VB) program. As a professional working with hundreds of children with autism over the past several years, I have found the Verbal Behavior Approach to be the best type of Applied Behavior Analysis (ABA) program to use when teaching children with autism and other developmental delays and disabilities.

I am often asked: "Which is better ABA or VB?" I say that this is like asking: "Which is better soda or Sprite?" In a nutshell, ABA is the science of changing behavior and VB is a type of ABA, just as Sprite is a type of soda. As a BCBA, I follow the principles of

ABA first and foremost, but I also use B.F. Skinner's analysis of Verbal Behavior (or, in easier terms, the Verbal Behavior approach) as I assess and teach language and learning skills.

After working with many children and some adults on the autism spectrum, I have found that implementing scientifically proven ABA/VB techniques results in improvements in behavior, language and learning skills no matter what the age or ability level of the child. In this article I propose the initial steps I recommend for parents like Mrs. T. and professionals such as Henry's teacher who want to get started using the Verbal Behavior Approach.

Verbal Behavior—History and Definitions

First, I want to clear up some confusion regarding Verbal Behavior (VB) by giving you a bit of history. In 1957, B.F. Skinner wrote his classic book titled Verbal Behavior that described language as a behavior and defined verbal behavior as any behavior mediated by a listener. One thing to keep in mind is that a child does not need to speak to be "verbal" since verbal behavior includes gestures, sign language, picture exchange, and pointing. A child who falls to the floor or pinches you is also displaying verbal behavior. As long as a listener is present and a child is displaying some behavior to communicate, that behavior is verbal behavior. In Verbal Behavior (1957), Skinner coined the term "verbal operant" and created names for the four verbal operants: the mand, tact, echoic, and intraverbal. These four verbal operants, he suggested, were the parts of verbal behavior that traditional linguists often call "expressive language." He also described "listener responding," which is equivalent to receptive language.

Many of you may have heard things such as "your child has an expressive language age of a 2.3-year-old and a receptive language age of a 3.0-year-old." This basically means your child expressively communicates or "talks" like a toddler a little older than two-years of age and "understands" language and can follow directions similar to a three-year-old. As I mentioned earlier, B.F. Skinner coined the terms mand, tact, echoic and intraverbal. Although these may be initially confusing



Henry and Mary: "labeling" things in a book

since they are not terms you use every day, these four verbal operants make the analysis of expressive language much clearer. Most importantly, by assessing a child's strengths and needs using these verbal operants, parents and professionals are often able to target skills, which most often leads to improved language and learning skills.

The Mand

Let's start by looking at the mand, since this is the most critical of all the verbal operants. A mand is a request, and you can remember this by remembering demand. A child (or an adult of any ability level) mands often for items (e.g., "I want juice"), attention (e.g., Look at me Mommy!"), and information (e.g., "Where are my shoes?"). A mand doesn't have to involve speech, however, since children can use an augmentative language system such as sign language, picture exchange or a device to make a request or mand. The mand is the most important verbal operant because it involves some level of motivation on the part of the requester. For example, if I'm thirsty I might mand for juice or another beverage. If I'm late and can't find my shoes, I might ask my husband for information regarding the location of my shoes. Mands are important since the item, attention. or information usually given after a mand serves as a direct reinforcer. If a child is unable to ask for the things he or she wants, this most often causes problem behavior. For all of these reasons, teaching children to mand needs to be the highest priority.

Other Verbal Operants

The tact is the next verbal operant; you can remember this by thinking of coming in contact with something in the



Mom and Henry: doing a puzzle

environment. Basically, a tact is a label of something that comes in contact with one of your senses. While tacts are often labels of pictures or items (show a picture of a car and the child tacts "car"), a tact can also be a tact of something that is heard ("I hear the doorbell"), smelled ("I smell coffee"), tasted ("This tastes salty"), or touched ("This is wet"). While tacts are very important to teach, you need to first start teaching children to mand for items that are highly motivating. A child should be taught to tact only after he or she can mand for several reinforcing items such as water, ball, car, and bubbles.

Echoics are easy to remember by thinking of an echo; this is when an adult says something and the child says that same word or phrase back. Most typically developing children learn most of their language due to their strong ability to echo. You tell a child without language delays, "this is a bulldozer," and he repeats "bulldozer." After one or two times of hearing and echoing the word "bulldozer," he knows what a bulldozer is. Children with autism tend not to imitate well and often cannot vocally imitate or echo any words. This is a critical skill, and we often see that once we can get vocal children to echo or nonvocal children to imitate sign language, the floodgates sometimes open and language and learning skills improve dramatically.

The last of the four verbal operants is the intraverbal. This is the answering of questions. If I ask a child, "How old are you?" I would be manding for information and his response of "five" would be an intraverbal. This is the hardest verbal operant and the last one to develop, even in children who are typically developing. The easiest intraverbal skills are usually song

ISSUE 30 2009 REPRINTED WITH PERMISSION OF THE AUTISM FILE 109

EDUCATION & THERAPIES

fill-ins, so when I say "twinkle, twinkle, little ______" and pause after I sing "little," the child who says or sings "star" would be giving an intraverbal response.

Nonverbal Operants

In addition to the four verbal operants, developing listener responding or the receptive skill area in children with autism is also very important. While not a verbal operant, it is very important that all children learn to respond to "go get your shoes," "touch the airplane," or "where's your head?" These skills don't involve any vocal speech and will lead to better compliance and comprehension for all children. Two other nonverbal operants important to children with autism include imitation and matching/visual performance skills. Like listener responding skills, there is a big advantage to working on imitation and matching skills, especially with early learners with minimal language abilities. Receptive, imitation, and matching skills are more easily prompted than verbal operants, so the child can learn these even if he or she doesn't yet have any speech. Once children gain the ability to follow adult directions, language and learning skills are usually accelerated.

Henry's Verbal Behavior

Let's take another look at Henry. While it has taken Henry a few months to acquire the ability to mand, he can now vocally mand for several items when they are in sight. He can ask for things such as juice, cookie, and pancake. Occasionally, he will even mand with full sentences. such as, "I want to go home." There are many things, however, that he still has difficulty manding for because he doesn't know the item's name or because it is out of sight. In addition to needing lots of work on increasing his ability to mand for items both in and out of sight, Henry also needs to eventually learn how to mand for actions, attention and information. While Henry's ability to mand for a few items while they are in sight is a great beginning skill, there is much work to be done to build on this operant, so manding must remain the central focus of Henry's programming for the foreseeable future. If manding is not the focus, problem behaviors will remain, and Henry's

language and learning will most likely not progress at optimal rates.

While Henry has some ability to mand, he demonstrates very weak abilities in the other three verbal operants (tact, echoic, and intraverbal skills). At this point, Henry cannot reliably tact anything or answer any questions. While he likes to sing some lines to some songs, he is not yet able to fill in words when an adult attempts to evoke intraverbal behavior. Henry also cannot echo an adult on command.

In addition, Henry also displays limited skills in the nonverbal operant areas (receptive, imitation, and matching skills). Henry's listener responding skills are very delayed; he cannot touch his body parts or go get his shoes if an adult directs him to do so. Henry can complete very simple puzzles, but requires some help to put together more complex ones. Henry also does not usually imitate actions or movements of adults or children.

Getting Started with ABA/VB Programming for Henry

By analyzing Henry's skills and weaknesses in the verbal operants, as well as by assessing his listener responding and other nonverbal operant skills, we can now determine the best way for his parents and the professionals who work with him to help Henry increase his language and learning skills.

As stated previously, Henry's manding abilities need to take center stage. Mrs T. and others working with Henry should continue to encourage (but not require) him to say the words of the items he wants. Since no one can force any child to talk, adults working with Henry should simply say the item name a few times prior to giving him the item using a procedure known as pairing. For example, if you are at the door and Henry wants to go outside, capture this motivation by standing in front of the door and say "open, open, open" with 1-2 seconds in between each word. Say the words in a slower and more animated tone. If Henry happens to echo "open" after you say it the first time, quickly open the door and give him extra praise, tickles, and other reinforcement in addition to opening the door. If he doesn't say anything, however, only say "open" about three times and then open



Henry and Mary: a manding opportunity at the door

the door. Do not hold out too long waiting or requiring Henry to talk, since you don't want to cause Henry to become frustrated and display problem behavior.

In addition to "sneaking in" mand opportunities throughout the day, such as when Henry wants a door opened, Mrs. T. should also try to sit down with Henry at least once per day at a small table and chairs to conduct mand sessions. These mand sessions, which can start out taking only a few minutes per day, will eventually turn into longer and more intensive teaching sessions. Mand sessions are explained in greater detail in my book, but, very simply, these sessions involve contrived mand opportunities to give Henry practice with manding. For example, if he likes cookies, bubbles and cars, as well as being picked "up" in the air, and has been heard using these words in the past, these three items and one action would be used during the mand sessions. In preparation for the mand session, Mrs. T. would break the cookie into several small pieces and have five or six small cars, as well as the bubble container. She might start by holding up a piece of a cookie and give it to Henry while saying, "cookie, cookie, cookie." When Henry reaches for the next piece of cookie, Mrs. T. might hold the piece back for a second and model the word "cookie" to see if Henry echoes. If he doesn't say anything by the third model, Mrs. T. should just give the cookie to him.

Programming to directly teach Henry other skills, such as echoing, tacting and intraverbals, should not be the focus at this point. Since Henry does like songs, however, I would recommend singing songs often and pausing to leave the last word of each phrase blank for second or two to encourage intraverbal song fill-ins; this

Verbal Behavior Assessment Form		
Date of completion Person completing Child's name Age Date of birth Medical Information Diagnosis (if applicable/known)	Tacting Assessment Can your child label things in a book or on flashcards? If so, please estimate the number of things your child can label and give up to 20 examples: Echoic Assessment Can your child imitate words you say? For	If you tell your child to clap his/her hands or stand up will he/she do it without gestures? Circle your answer. Almost always Usually Sometimes Almost never Will your child touch his/her body parts for example if you say "Touch your nose" Yes No If yes, please list the body parts he/she will touch without any gestures from you:
Age at diagnosis	example if you say "say ball" will he/she say "ball"? Will he/she imitate phrases?; and if you say "I love you" will he/she repeat "I love you"? Single words Yes \(\text{\tex{\tex	Imitation Assessment Will your child copy your actions with toys if you tell him/her "do this"? For example, if you take a car and roll it back and forth and tell your child "Do this" will your child copy you? Yes □ No □
Describe eating and drinking patterns. Please indicate if child can feed self, what texture/types of foods he/she eats. Also list if bottle or sippy cups are used: Describe sleeping patterns:	Intraverbal Assessment Can your child fill in the blanks to songs? For example if you sing "Twinkle, Twinkle Little," will your child say "star"? Yes □ No □ Please list songs that your child fills in words	Will your child copy motor movements such as clap hands or stomp feet if you do it and say "Do this"? Yes \(\sigma \) No \(\sigma \) Visual Skill Assessment Will your child match identical objects to objects, pictures to pictures, and pictures
Describe toileting issues:	or phrases to: Will your child fill in the blanks to fun and/or functional phrases such as filling in "Pooh"	to objects if you tell him/her to "match"? Yes \(\text{No} \(\text{No} \) Unsure \(\text{U} \) Will your child complete age-appropriate puzzles? Yes \(\text{No} \) No \(\text{U} \) Unsure \(\text{U} \)
Language Information Does your child ever use any words? Yes No If yes, please describe the amount of words and give examples of what he/she says:	when he/she hears "Winnie the"?; and will he answer "bed" when he hears "You sleep in a"? Yes \(\beta\) No \(\beta\) Will your child answer WH questions (with	Behavior Assessment Is your child currently able to sit at a table or on the floor and do simple tasks with an adult? Yes \(\textstyle{1}\) No \(\textstyle{1}\) Unsure \(\textstyle{1}\)
If no, does your child babble? Yes □ No □ If yes, please list sounds you have heard:	no picture or visual clue)? For example if you say "What flies in the sky?" will your child answer "bird" or "plane"?; and will he/ she name at least three animals or colors if you ask him/her to? Yes No	Please list any problem behaviors (crying, hitting, biting, falling to the ground, making loud noises, hitting his/her own head) that your child displays that you are concerned about. Please estimate the
Manding Assessment Can your child ask for things he/she wants with words? Cookie, juice, ball, push me? Yes \(\text{\texi\text{\text{\texi\text{\text{\text{\text{\text{\texi\tilit{\text{\text{	Receptive Assessment Does your child respond to his/her name when you call it? Circle your answer. Almost always Usually Sometimes Almost never	number of times these behaviors happen (100 times/day, ten times/week, one time per day) as well as a few examples of when the behavior occurs. Also describe what strategies you have tried to control these behaviors and whether these strategies have
If no, how does your child let you know what he/she wants? Circle your answer	If you tell your child to get his/her shoes or pick up his/her cup, does he/she follow your direction without gestures?	been successful or not:

Almost always Usually Sometimes Almost never ADAPTED FROM THE VERBAL BEHAVIOR APPROACH: HOW TO TEACH CHILDREN WITH AUTISM AND RELATED DISORDERS (BARBERA & RASMUSSEN, 2007)

ADAPTED AND RE-PRINTED WITH PERMISSION FROM JESSICA KINGSLEY PUBLISHERS.

Circle your answer.

Gestures/pointing/pulling an adult/sign

language/pictures/crying/grabbing

EDUCATION & THERAPIES

can be done both within and outside of mand sessions. While echoics, tacting and answering questions (intraverbals) are very important skills, Henry's manding abilities need to be strengthened first. In addition, when Henry becomes a willing learner and begins to enjoy sitting at the table during mand sessions, his parents will most likely see his ability to echo and his ability to tact reinforcing items increase. These skills will be strengthened through mand sessions.

Materials and Resources Needed to Get Started

You might be wondering what materials Mrs. T. needs to get started with mand sessions. In addition to a small table and chairs that Mrs. T. already owns, I also recommended she gather some very simple toys and puzzles. While some toys (such as hammer and balls and a simple shape sorter) may be labeled on the box as appropriate for a much younger child, these toys may help Henry build up his skills and teach him to respond to adult requests. I also suggested that Mrs. T. go to a dollar store and purchase two identical boxes of basic flash cards. This is important. since it will be helpful to have two pictures of identical apples, cars, birds and other "first word" pictures to teach Henry how to match these pictures, and eventually to teach him how to tact the cards and answer questions about the items on the flashcards.

While mand sessions can be done anywhere, I usually recommend that mand sessions be conducted at a small table, especially if the child is of preschool age and not particularly keen on sitting with a teacher or parent to learn. It is beneficial to "pair" a table and chair area with reinforcement because it is important to teach Henry that when he comes to the small table and sits with his mom, therapist, or teacher, good things happen. Another added bonus to starting off with mand sessions at a small table is that, for many children, you can begin to "slip in" work and present very easy demands - such as toy imitation, simple puzzles or matching activities - in between mands. More intensive and longer teaching sessions can occur when Henry is excited about coming to the table and complying with simple tasks without problem behavior.

More Intensive ABA/VB Programming

Studies show that children with autism, in order to make optimal progress, need 30-40 hours per week of school and/or home-based ABA programming with well-trained therapists and oversight by skilled professionals. But, for a variety of reasons, including lack of skilled professionals and financial constraints, many families cannot implement full ABA programs. This article illustrates, however, that even without implementing 30-40 hours per week of ABA programming, there are several scientifically proven techniques that parents and teachers can immediately begin using to help children.

While the brief assessment form included in this article (adapted and reprinted from my book with permission from Jessica Kingsley Publishers) will assist you in identifying the strengths and needs of your child, a more in-depth assessment tool will most likely be needed before intensive ABA/VB programming can begin. The Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP) (Sundberg, 2008) is a new assessment tool that I highly recommend. The Assessment of Basic Language and Learning Skills (the ABLLS) (Partington and Sundberg, 1998) and the ABLLS-Revised (Partington, 2006) are other VB assessment tools that are also helpful and commonly used. In order to assess accurately using one of these tools and program most effectively for your child, consultation with a BCBA familiar with Skinner's analysis of verbal behavior is strongly advised. The assessment tools listed above are available at www.difflearn. com and information regarding BCBA's can be found at www.bacb.com.

Other Recommendations

In addition to recommending Mrs. T. begin mand sessions for short periods each day and incorporate easy puzzles, imitation skills, and matching skills into these sessions, I also gave her some general strategies that I believe are helpful to all parents and professionals who want to get started using the Verbal Behavior Approach.

- **1.** Be positive with your child. Try to use eight positives ("Great job saying juice!") for every negative ("No, don't do that.").
- 2. Focus on pairing the teaching

environment, materials, and people with high levels of reinforcement by giving lots of reinforcers with no effort or work required.

- **3.** Make manding (requesting) the centerpiece of your child's program.
- **4.** Reduce demands by giving directions that are easy and that can be prompted.
- **5.** Label things throughout the day with one- or two-word phrases in a slightly emphasized, slower, and more animated tone (e.g., "cow, cow, cow" as you are handing your child a cow puzzle piece; "down, down, down" as you and your child are walking down the stairs).
- **6.** Always be gentle with your child. Don't yell or use physical force to gain compliance.

By making the environment more positive and reducing demands, your child will most likely be happier and more willing to learn. Additionally, if you bombard your child's environment with lots of single words in an emphasized and animated tone, your child may begin to pick up some words without much effort. Finally and most importantly, a heavy focus on manding will help your child learn that if he talks (or signs or exchanges pictures), he gets good things. This "getting good things" -- or reinforcement -- will most likely lead to an improvement in language and learning skills. By assessing your child's strengths and needs in terms of the verbal and nonverbal operants, and by utilizing proven ABA/VB strategies, you'll be well on your way to getting started with the Verbal Behavior Approach.

References

Barbera, M.L. & Rasmussen, T. (2007). The verbal behavior approach: How to teach children with autism and related disorders. London: Jessica Kingsley Publishers.

Partington, J.W. (2006). The assessment of basic language and learning skills—Revised. (TheABLLS-R). Pleasant Hill, CA: Behavior Analysts, Inc.

Partington, J. W., & Sundberg, M. L. (1998). *The assessment of basic language and learning skills (The ABLLS)*. Pleasant Hill, CA: Behavior Analysts, Inc.

Skinner, B.F. (1957). *Verbal Behavior*. New York: Appleton-Century.

Sundberg, M (2008). The Verbal Behavior Milestone Assessment and Placement Program: (The VB-MAPP). Concord, CA: AVB Press.