

# CONTINUING EDUCATION for Speech-Language Pathologists

## Helping Students with Autism Find Their Voice

PDH Academy Course #2001 (3 CE HOURS)



PDH Academy is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. **See course information for number of ASHA CEUs, instructional level and content area.** ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.

This course is offered for .3 ASHA CEUs (Introductory level, Professional area).

### Course Abstract

This course presents evidence-based strategies that allow students with autism spectrum disorder (ASD), as well as other students who are limited verbally, to become more effective communicators. It emphasizes “manding,” or requesting, touching on the rationale behind teaching early learners to mand, the structure of manding sessions, data collection, and relevant case studies.

*NOTE: Links provided within the course material are for informational purposes only. No endorsement of processes or products is intended or implied.*

### Learning Objectives

By the end of this course, learners will be able to:

- Recall the evidence-based rationale behind Applied Behavior Analysis, and how it applies to the use of manding
- Distinguish between verbal operants
- Recognize the importance of rapport-building
- Recognize manding strategies, with attention to the different environments in which they may be used
- Identify information and strategies pertaining to data collection, evaluation, and goal-setting

## Timed Topic Outline

- I. Introduction (5 minutes)
- II. Evidence-based Practice and Applied Behavior Analysis (15 minutes)
- III. Verbal Behavior, Verbal Operants (5 minutes)
- IV. The Power of Manding (100 minutes)  
Pairing, Manding 101, Manding in the Natural Environment, Structured Manding Sessions, Manding Throughout the Day
- V. Data Collection, Evaluation, and Goal-Setting (20 minutes)
- VI. Case Studies & Conclusion (15 minutes)
- VII. Handout, Additional Resources, References, and Exam (20 minutes)

## Delivery Method

Correspondence/internet self-study with interactivity, including a provider-graded final exam. *To earn continuing education credit for this course, you must achieve a passing score of 80% on the final exam.*

### Accessibility and/or Special Needs Concerns?

Contact customer service by phone at (888)564-9098 or email at [support@pdhacademy.com](mailto:support@pdhacademy.com).

## Course Author Bio and Disclosure

Rosemarie Griffin, MA, CCC-SLP, BCBA, COBA, is a licensed speech-language pathologist and board certified behavior analyst, and product developer. She completed her Master's degree at Kent State University, her education specialist degree in school administration at Cleveland State University, and coursework leading to licensure as a board certified behavior analyst at the University of North Texas. Since 2003, Mrs. Griffin has worked as a speech-language pathologist and has held positions at the Cleveland Clinic Lerner School and at the STARS program (Specialized Teaching for students with Autism and Resources Services) with the Geauga County Educational Service Center. A move to Texas allowed Mrs. Griffin to become an autism facilitator and support specialist for Leander Independent School District in Austin, Texas. Currently she splits her time between KidsLink and a local public school system. She is also the creator of the Action Builder Cards for systematic language instruction.

Mrs. Griffin is a member of the adjunct faculty at Kent State University in Kent, Ohio. She is fully licensed by both the Ohio Board of Speech Pathology and Audiology and the Ohio Department of Education, and she is a certified member of the American Speech-Language-Hearing Association (ASHA). She is also fully licensed by the Behavior Analyst Certification Board and by the Ohio Board of Psychology. Mrs. Griffin is passionate about lecturing on effective communication services for students with autism and has done so for many organizations, including the Ohio Speech-Language-Hearing Association, Milestones, and SpeechPathology.com. She is also the creator of the Action Builder Cards for systematic language instruction.

The material found in *Helping Students with Autism Find Their Voice* is © ABA Speech LLC, <http://www.abaspeech.org/>. It is licensed to PDH Academy for the purposes of continuing education.

DISCLOSURES: Financial – Rosemarie Griffin's work is available for purchase at SpeechPathology.com and ABA Speech LLC, and she received a stipend as the author of this course. Nonfinancial – No relevant nonfinancial relationship exists.

## Introduction

The U.S. Centers for Disease Control and Prevention (CDC) report finds the prevalence of autism spectrum disorder (ASD) is at one in 68 children (or 1.46 percent), and the range of communication impairment in children with autism varies widely; as many as 25-30% of individuals with autism are non verbal (Tager-Flusberg et al., 2005).

As speech-language pathologists, we provide the critical guidance that helps students identify, acquire, and use a functional response form. With that in mind, the emphasis of this course is helping students with autism find their voice. Focusing on early learners (students who may be nonverbal or very limited verbally), we will discuss evidence-based strategies that allow students with autism, as well as other students who are limited verbally, to become more effective communicators.

After this training, you will have a structured roadmap for intervention with this type of learner.

### Therapy Snippet

*To be clear, the "early learner" is not necessarily someone that is a child.*

*When I worked at a private clinic, a 19-year-old young man came to us who, after 19 years of therapy, still did not have a functional response form. He was very aggressive, and was using maladaptive behavior to navigate his environment.*

*We introduced him to a static 16 cell AAC device, and started with requesting: he was directly taught how to request wanted items and actions. For the first time, he was able to request that he wanted to eat McDonalds, or that he wanted to take a walk.*

*We saw a gradual increase in his ability to spontaneously communicate with the individuals in his environment. We also saw a decrease in his aggressive behavior. How amazing to see the growth in this young man: the increase in his quality of life as his communication skills increased.*

"What are the landmarks on this journey of helping students with autism find their voice?" you may ask. Well, as a Board Certified Behavior Analyst (BCBA) as well as a speech-language pathologist, I will share concepts that I use daily in my line of work.

First, we will discuss the rationale for starting with teaching early learners to request wanted items and actions. We will briefly discuss the science of applied behavior analysis (ABA), with an emphasis on using verbal behavior to teach communication skills. Not everybody that uses the science of ABA uses verbal behavior to teach language, but I make sure my students have the practice among their skill sets.

As part of this discussion, we will look at the

knowledge, vocabulary, and background accessed by the analysts and consultants that may help you with difficult cases – particularly the BCBA's who consult in public school districts to help set up and maintain individualized curriculums for students with autism. Many of the consultants that I work with are using verbal behavior to address weaknesses in language skills. They are using many of the terms that I will review here.

Next, we'll discuss verbal operants and their importance. B.F. Skinner (you may remember him from Intro to Psychology), in his book *Verbal Behavior* (1957), talked about communication as a behavior, emphasizing its function instead of its form. The different verbal operants refer to the different ways that we use our communication.

Skinner also discussed "manding," which refers to the ability to request. We will talk about what manding is, what it means, and address the importance of direct instruction with manding. In my experience, students start talking and communicating a lot more when manding is a focus of their therapy sessions, so we will further address how to set up manding sessions.

Having established the importance of systematic instruction on the skill of manding, we will consider various ways that we can capture data on this skill, look at applicable evaluations, and visit goal-setting.

Finally, we will go over several case studies, synthesizing the information presented and problem solving systematically.

I hope our discussion will leave you with the skills you need to allow your clients to understand that their communication is valuable, and to work comfortably with consultants regarding the needs of these clients.

### Therapy Snippet

*Another student, who I will talk about throughout this course, came to the clinic at age 8, already supplied with an iPad that contained a dynamic AAC application. However, the student never used the device spontaneously to communicate. He also engaged in very dangerous and intense aggressive and self-injurious behavior.*

*We worked on building a rapport with him, getting to know what he enjoyed doing, and slowly built in direct instruction regarding using his iPad to request wanted items, actions and places.*

*Over the course of 2 years, this 10 year old has made great and inspiring gains. He voluntarily carries his device and uses it to request wanted items and actions. In addition, he has been able to effectively label, create sentences, and relay how he is feeling. This increase in communication has changed this student's life and his family member's lives as well. He is able to visit more places and engage in a variety of activities and with a variety of family and school staff members.*

*It all started with direct instruction regarding manding, which helped this student learn that his ability to communicate was powerful.*

## First Stop: Evidence-based Practice and Applied Behavior Analysis

Being aware of the American Speech-Language-Hearing Association (ASHA)'s position on evidence-based practice for individuals with autism is very important. ASHA has a practice portal (see Web Resources, in References) that provides a wealth of information, resources, and discussion about evidence-based treatment for autism.

Below are some of the highlights and recommendations that correlate with our discussion today.

- **Family involvement is critical.** We will discuss how to collaborate effectively with families regarding increasing functional communication.
- **SLPs can help individuals with autism by ensuring they have a functional communication system.** This just means the individual needs a way to communicate in the world, whether it is with sign, pictures, Augmentative-Alternative Communication (AAC), or verbalizations, or by using a multi-modal approach. (I will also be referring to this functional communication system as a "functional response form.")
- **SLPs should help students use their communication in a variety of settings and with a variety of communicative partners.** The term that encompasses this is generalization, which will be defined below.
- **SLPs should use a systematic approach to taking data so that we can analyze and determine if our therapeutic approach has been and continues to be effective in helping our client.**
- **SLPs and educators should determine which method for treatment is effective for clients by taking into consideration the individual's level of social and linguistic development, cultural background and values, personal preferences, family resources, learning style, behavior repertoire, and communication needs.**

### Applied Behavior Analysis

A formal definition of Applied Behavior Analysis (ABA) is that it is a science devoted to the understanding and improvement of human behavior (Cooper, Heron, Heward 2007).

In other words, ABA is the science of studying behavior, and applying data supported techniques to increase and/or decrease behaviors that are meaningful to the client and the client's social environment. It

is a very systematic way to look at human behavior, including verbal behavior.

Let's begin with some basic terms used when discussing the science of applied behavior analysis.

**Antecedent** – An environmental condition or stimulus, existing or occurring prior to a behavior of interest.

*Example: The teacher gets out a book; the student runs away from circle; – the student is given a break from class. The antecedent is the teacher getting out a book.*

**Behavior** – The activity of living organisms; human behavior includes everything that people do.

*Example: The teacher gets out a book; the student runs away from circle; the student is given a break from class. The behavior is the student running away.*

**Consequence** – A stimulus that follows a behavior of interest.

*Example: The teacher gets out a book; the student runs away from circle; the student is given a break from class. The consequence is the student being given a break from class.*

**Data** – The results of measurement, usually in quantifiable form; in applied behavior analysis, data refers to the measure of some quantifiable dimension of a behavior.

**Generalization** – The occurrence of a target behavior in a non-training situation after training.

*Examples: A student learns to label “cookie” in the classroom and subsequently labels it while out to eat with his parents at a restaurant. A student learns to request “listening to music” on the iPad at school with a speech therapist and later requests “listening to music” at home with her mom and dad.*

**Motivation** – The general desire or willingness of someone to do something. Examples: Johnny is not allowed to watch TV at home, so he is motivated to attend to the video shown in class. Sally is very thirsty after her walk, so she is motivated to find a nearby water fountain.

**Multi Modal Communication** – Allows for many ways to communicate, including speech or vocalizations, gestures, manual sign, and augmentative communication.

**Natural Environment Teaching (NET)** – The child's current interest or motivation controls the teaching activity. Teaching targets are weaved into play and other enjoyable activities.

**Pairing** – The process of using valuable reinforcers to condition people, materials, environments to become reinforcing.

**Prompting** – A prompt is used to increase the likelihood that a person will engage in the correct behavior at the correct time.

*Examples: Asking Trevon to pick a book and pointing to a book; pointing to the book is a prompt. Asking Hank to clap his hands and modeling the action for him; modeling the action is a prompt. Asking Peggy “What is your favorite food?” and showing her a picture of a pizza; the picture of the pizza is a prompt.*

**Reinforcement** – Occurs when a stimulus change immediately follows a response and increases the future frequency of that type of behavior in similar conditions.

*Example: Don wants a break and says, “Can I have a break?” The teacher says “Sure, Don, you can have a break.” Don asking and being reinforced with a break will increase the future frequency of this requesting behavior in similar conditions.*

**Three-term Contingency** - The antecedent that is present when the behavior occurs, the behavior, and the reinforcing consequence.

*Example: Antecedent = seeing a Finding Dory book; Behavior = asking to buy the book; Consequence = buying the book*

Many of our students with autism, because they may be nonverbal or limited verbally, have had to use their behavior to communicate – often in maladaptive ways. When we analyze their verbal behavior and help them increase their socialization and their communication, we typically see a decrease in any type of maladaptive behaviors that they are displaying. As speech language pathologists, then, we have a responsibility to help our clients acquire, apply, and maintain functional receptive, expressive and social language skills – to help improve their communication skills, but also help increase their overall quality of life.

ABA-based approaches for educating children have been extensively researched, and in the last 30 years, ABA has been acknowledged as best practice for teaching children with autism. As you already know, there are a myriad of treatments available for students with autism – and parents of children with autism, understandably wanting what is best for their child, are often inundated. When helping them sift through the science versus pseudoscience, you can introduce them to the National Standards Project (NSP) (<http://www.nationalautismcenter.org/>), which works to answer the very crucial question: how do we effectively treat individuals with autism spectrum disorder? The National Standards Report (see Web Resources, in References), issued by the NSP, reviews interventions and shares which have been shown to be effective for individuals with ASD. The Report recognizes behavioral-based approaches – including ABA – as an established form of treatment.

*“The National Standards Report may be the most important document that parents and practitioners ever read and the most important weapon in their arsenal to fight autism.”*

*Marjorie H. Charlop, Ph.D. / Professor of Psychology, Claremont McKenna College / Director, The Claremont Autism Center*

## Next Stop: Verbal Behavior, Verbal Operants

Frequently, as SLPs, we want to know what a student’s mean length of utterance is; however, when working with students with autism it is more important to think about how the student is using their language *functionally*.

B.F. Skinner wrote the book *Verbal Behavior* (1957), which looks at the functional analysis of language. He talks about language in terms of how it functions – verbal behavior – which is where verbal operants come into play: as we’ll discuss below, verbal operants refer to the different ways that we use our communication. Many consultants use this terminology, so a familiarity with it will help you discuss the clients on your mutual caseloads.

**Manding** – A mand is a request. We start work on this operant to help increase a learner’s spontaneous communication, encouraging them to ask for things that they want. We will discuss this operant at length later in the course.

ANTECEDENT	BEHAVIOR	CONSEQUENCE
Motivation	Verbal response	Specific to the learner’s motivation

After seeing a cookie	Saying “eat cookie”
Wanting to play iPad	Saying “iPad”
Seeing a book you like	Saying “read book”
Wanting a drink	Saying “drink”
Seeing a ball	Saying “let’s play ball”

**Tacting** – Involves labeling a picture, object or action. Students may work on tacting to increase their expressive vocabulary.

ANTECEDENT	BEHAVIOR	CONSEQUENCE
Non verbal stimulus (object, picture)	Verbal response	Social reinforcement

Seeing a football	Saying “football”
Seeing LeBron James	Saying “Lebron”
Seeing Starbucks	Saying “Starbucks”
Seeing a dog	Saying “doggy”
Hearing an airplane	Saying “airplane”

**Intraverbal** – Filling in the blank and answering questions are both examples of intraverbals. Intraverbals are the basis for reciprocal conversation. They are the building blocks for engaging verbally with others.

So how, specifically, does ABA apply to your work as an SLP?

ABA seeks to impact socially significant behaviors that are in need of improvement: for example, as we’ve discussed, many of our students who are limited verbally may also have challenging behaviors that we want to address. We will talk about how to increase functional communication, thereby decreasing the challenging behaviors.

ABA considers behavior in objective and measurable terms: for our purposes, then, we will discuss setting up manding, as well as data collection, analysis, and analysis-based treatment decisions. The more systematic we can be the better.

ABA uses a three-term contingency – or the concept of an antecedent stimulus, a behavior, and a consequence – to analyze human behavior. For example: *Antecedent = student sees a cookie; Behavior = student says “cookie;” Consequence = student gets a cookie.* If the student says “cookie,” and gets the cookie, that verbal behavior is reinforced. We can use this template to set up situations for our clients that will help them increase their verbal behavior.

A three-term contingency can also illuminate undesirable behaviors. To consider another example, *Antecedent = work is presented; Behavior = student clears the table; Consequence = student gets out of work.* This is not a behavior we want to reinforce: if the student clears the table and gets out of the work, that student’s escape behavior will increase. We as speech therapists need to wear our detective hats and analyze what our student is trying to communicate in that moment, then teach the language to replace the behavior. We may conclude that the student is engaging in this type of behavior if they are motivated to escape the task. So we give the student the tools to, instead, request a break.

Behavior and communication are very much interrelated, and this fact is very important as we work with clients with autism. We will discuss this topic in greater depth as we address manding.

ANTECEDENT	BEHAVIOR	CONSEQUENCE
Someone's verbal behavior	Verbal behavior (does not match other learner)	Social

Hearing "Ready, set"                Saying "go"  
Hearing "One, two"                Saying "three"  
"When is your birthday?"        "June 30th"  
"What food do you like?"        "Pizza"  
"Favorite CAVS player?"        "Lebron James"

Echoic – repeating what is heard, usually immediately. Work on echoics can help a learner say many different functional words. Echoics can also be worked on to systematically address saying different sounds and syllable shapes.

ANTECEDENT	BEHAVIOR	CONSEQUENCE
Someone's verbal behavior	Verbal behavior (does match other learner)	Social

"Say bye bye"                        "Bye bye"  
"Say all done"                        "All done"  
"Say shhhh"                            "Shhhhh"  
"Say high five"                        "High five"  
Saying "movie" before watching one        "Movie"

Listener Behavior – following instructions or complying with a request: walking to the nurse's office when given the direction "Please take this to the nurse's office," for example. We work on this skill set to increase overall receptive language skills.

ANTECEDENT	BEHAVIOR	CONSEQUENCE
Someone's verbal behavior	Non- verbal compliance	Social

"Please get the wipes."                Gets the wipes  
"Grab the markers."                    Grabs the markers  
"Go to the gym."                        Goes to the gym  
"Circle the A."                            Circles the A  
"Pick a book."                            Picks a book

The following quote is also Skinner's, from *Science and Human Behavior* (1953): "All we need to know in order to describe and explain behavior is this: Actions followed by good outcomes are likely to reoccur, and actions followed by bad outcomes are less likely to reoccur." We've all seen this happen in everyday life, and it holds true for our clients as well. If a child uses

a maladaptive behavior (they want a cookie, so they grab for it), we impose a bad outcome (they do not get it) with the intention of reducing the behavior of grabbing. On the other hand, if the student learns to press their AAC device to say "'cookie" or they sign cookie, then they get a cookie, we reinforce those actions with good outcomes. Systematic and direct instruction regarding manding will help our students learn that their ability to communicate is powerful!

Verbal behavior also has a focus on teaching all of the meanings of the word. Just because a student can label a cookie does not mean that they can also say the word cookie when they want to request, or answer the question "What is a dessert you like to eat?" with "Cookie." We as providers need to be cognizant of this, and make sure that learners can use functional words to communicate for a variety of purposes.

**COOKIE**

Mand – wants a cookie and says "eat cookie"

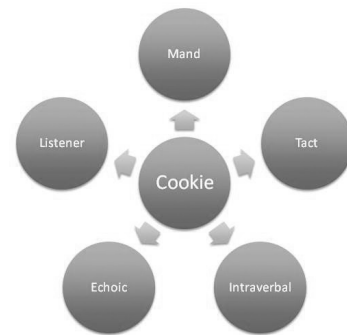
Tact – sees a cookie and says "cookie"

Listener Behavior – follows the direction "get the cookies"

Intraverbal – answers the question "What is your favorite dessert?" with the word "cookie"

Echoic – repeats "cookie" upon hearing the word cookie

**Teach all the "meanings"**



During this course we're focusing on manding, but knowing about and feeling comfortable with all the verbal operants is important for speech language pathologists. As you know, being systematic and detail oriented in our analysis, goal-setting, and reporting allows our students to make greater gains, and allows us to communicate their progress more clearly. Using the verbal operants helps you to analyze your learner's current communication skills, set functional and systematic language goals, and chart their progress. A goal that states "Joe will label familiar places (a total of 8) with 100% accuracy by January 2017" is more specific and measurable than "Joe will label correctly with 80% accuracy by January 2017." By incorporating

the verbal operant of tacting (labeling) – and being specific about what is labeled and how many items we want the students to label – we make it easier to select targets for this goal, measure progress with this goal and collaborate with other members of the team on how to address this goal.

## Next Stop: The Power of Manding

Manding, as we discussed above, is when a speaker asks for what he/she wants or needs.

Manding is how we all start communicating: for babies, crying functions as a way to gain access to desired items, like a diaper change or food or cuddles. As a child grows and develops, crying is replaced with other ways to communicate (i.e. sign, gestures, word approximations). Manding is the first repertoire learned by all children, and are very important for the early development of language and for day-to-day verbal interactions of children and adults (Cooper J.O, Heron T.E, Heward W.L., 2007). It is important to focus on manding first; in its absence, it is unlikely that you will be able to teach other verbal behavior repertoires.

Manding is the only verbal behavior that immediately benefits the speaker: I say something, I get something. The gold standard is for a student to be initiating; to say, “I want to play the game. I want to see the trains,” rather than waiting to be asked “What do you want?” Some students – particularly, in my experience, those with autism – are very prompt-dependent. Manding helps teach them that they can be initiators. By making sure that our direct instruction has a targeted focus on manding, we allow for our students to increase their spontaneous communication: a student learns that when they want to take a walk, they can ask to “take a walk” and immediately go for a walk. This simple direct teaching model, incorporating a student’s favorite things, actions, etc., helps our students increase their expressive language skills.

As we’ve mentioned previously, when we see an increase in a person’s ability to communicate and get their needs met, we often also see a decrease in maladaptive behavior. Some early learners have not had access to effective communication training and they are relying on their behavior to communicate instead of using a more appropriate response form. For example, if a seven year old learner with no functional response form sees another student eating fries at lunch, wants some and has no way to say “Eat fries” or “fries,” they may just grab the fries to get access to them. Direct instruction in manding can help these students replace their behavioral repertoires with functional response forms.

### Therapy Snippet

*About 4 years ago I met a new student at my place of work. He was 8 years old with no way to communicate, and he engaged in a lot of aggressive and self-injurious behavior.*

*We started by presenting him with a variety of items, to get an idea of what he was motivated to engage with, but to make matters more difficult, this student did not have many things that he enjoyed doing: he did not engage with toys when presented, he did not like to watch videos, he did not like going for walks, etc. As his initial set of reinforcers was pretty much nonexistent, we started with using Proloquo2Go on his iPad to request preferred snacks.*

*As the student started to use his device to request wanted snack items, we continued to present him with potential reinforcing items – and discovered that he really loved music! We systematically worked on teaching this client to request music, to request that he wants to pick a song, and to request that he listen to one more song. All of these mands together have allowed him to have some control over his environment.*

*In addition, the ability to request and enjoy a variety of songs has increased his leisure skill repertoire, giving him something fun to do when not at school or during a break time at school. This has also enabled him to wait more effectively when at the doctor’s office, airport, restaurants, etc. It has even allowed him to enjoy family trips to Disney World!*

*After 4 years of therapy, this student uses his iPad on his own to request wanted items and actions. He is also able to answer simple questions and label preferred items.*

*His educational team currently consists of 1 on 1 instructors, a board certified behavior analyst, an intervention specialist, his parents, an occupational therapist and a speech language pathologist, all of whom work collaboratively to continue to strengthen his overall communication skills. We are so very proud of his progress!*

## Where to Start?

As SLPs, we need to take time build rapport with our students so that we can form a relationship.

It is a sad reality that some students have had experiences that make them less than eager to work on increasing their communication skills. Right off the bat, then, we want to show that “good things happen when the SLP is around.” We want our students to see us as the person that delivers great things to them. We want to be known as the person who has puzzles and the iPad and plays games. We do not want to be known as the person that comes into their classroom, takes them out into a private room, demands a lot of things, and does not give much reinforcement.

### Tips for Building Rapport:

It seems like such an easy concept, but it can be difficult to build rapport with students who have limited language, like those with autism. Oftentimes we are more concerned about taking data when we are working with new students than building a relationship. But we need to take sufficient amounts of time to build relationships with new students

without worrying about productivity. This time is very valuable: by getting to know your clients and building relationships with them, by helping them to see you as someone to have fun with, by linking yourself to the delivery of preferred items or activities, you are laying the groundwork for future success.

During this time, it is important to discover what your clients like to do for fun. Present them with potential reinforcers, and keep track of responses: for example, provide them with puzzles, or show them a video on [www.gonoodle.com](http://www.gonoodle.com). Do they like the puzzles? Music? Dancing? This goes back to observing their behavior – and here is where taking data, such as: “Do they like this? Do they like it enough to request it?” can be helpful.

Sometimes we can get into a reinforcement rut: “Here are the things I have available for reinforcement; I hope my children like them.” But inevitably, you will work with students who have very limited likes, or may seem like they do not like anything – and even with children who are very challenging, we need to find out what they are really into. A preference assessment can help you discover additional reinforcers.

Preference assessments can be found on the Internet; there are many different ones available. One of my favorites is the Potential Reinforcer Profile developed by Amy McGinnis, M.S., OTR (<http://amymcginnis.com/>). It provides lists of visual, auditory, and tactile reinforcers, which can be reviewed with parents, the classroom teacher, etc. as well as incorporated into pairing. If your client doesn’t seem to have many reinforcers, it gives you additional ones to think about: for example, does the child like to walk around with a straw in his hand? Does he request “straw?” What else would give him that same sensation?



### Potential Reinforcer Profile

Instructions: If an item below has never been tested with your learner, leave that row blank. If the items/activity is slightly, moderately or strongly reinforcing, check the appropriate box. If the item is not of value to your learner, check the “No” box.

Learner’s name: \_\_\_\_\_

I. Visual Reinforcers				
Potential Reinforcer:	No	Slightly	Moderately	Strongly
T.V. / movies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Computer games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video games	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wind-up toys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tops / spinners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flashlight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toys that light up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Make sure that this time spent playing or engaged in leisure activities with students does not become a time that we demand language from them – we will have plenty of direct instruction time ahead. This pairing time should be spent with the speech therapist engaging with the child by playing with them; if

talking is involved, the speech therapist is simply commenting on what is happening with the activity. We want to make sure that this pairing time is not confused for a time to bombard our student with questions to answer and items to label. The idea is simply to see what potential reinforcers the student likes, and identify the ones they can mand for.

### Manding 101

Once you have built rapport with your student and they are eager to see and work with you, we move onto manding.

First, let’s review prompting. Mary Lynch Barbera’s book *The Verbal Behavior Approach* defines the word prompt as follows: “A prompt is a hint or cue to aid the student to make the correct response.” Whenever you add a prompt you must be planning how to fade out that prompt so the student can become independent with the response. Prompting levels will differ based on what level of support your learner needs to learn the skill.

#### Vocal Prompt

If we are working with a student who is vocalizing to communicate we may use a vocal prompt when working on requesting.

- *Antecedent:* Student sees bubbles and points to them
- *Behavior:* SLP says “blow bubbles,” Student says “blow bubbles”
- *Consequence:* Student gets to play and blow bubbles

The vocal prompt is the SLP saying “blow bubbles”

#### Full Physical Prompt

If we are working with a student who is using sign language to communicate, we may use a full physical prompt to help them mand more effectively.

- *Antecedent:* Student sees bubbles and points to them
- *Behavior:* SLP uses hand over hand prompting to help the child to make the sign for bubbles

- *Consequence:* Student gets to play and blow bubbles

The full physical prompt is the SLP’s hand over hand helping the child to make the sign for bubbles



### Partial Physical Prompt

If we are working with a student who is using sign language to communicate, we may use a partial physical prompt to help them mand more effectively.

- **Antecedent:** Student sees bubbles and points to them
- **Behavior:** SLP uses taps the student's elbow to partially prompt them to make the sign for bubble
- **Consequence:** Student gets to play and blow bubbles

The partial physical prompt is the SLP tapping the student's elbow so that they are given a partial prompt to help make the sign for bubbles

### Gestural Prompt

If we are working with a student who is using sign language or an augmentative communication device to communicate, we may use a gestural prompt to help them mand more effectively.

Below are 2 examples to illustrate how we could use this prompt.

Student who uses sign language to communicate

- **Antecedent:** Student sees bubbles and points to them
- **Behavior:** SLP models the sign for bubbles; the student does the sign after seeing this model prompt
- **Consequence:** Student gets to play and blow bubbles

The gestural prompt is when the SLP models the sign for bubbles

Student who uses augmentative communication to communicate

- **Antecedent:** Student sees bubbles and points to them
- **Behavior:** SLP points to the correct button or sequence of buttons on the students to device, student points to that same button or sequence of buttons on the device
- **Consequence:** Student gets to play and blow bubbles

The gestural prompt is when the SLP points to the correct button or sequence of buttons

Let's next discuss what to expect when beginning work on manding with an early learner. If the learner is currently nonverbal and has no functional response form, we will start with using just one word to communicate. For example, if the learner wants to look at the iPad, we would help or prompt them to request "iPad" – not expect them to say, "I want iPad." This is a mistake that many providers make when first working on manding. We want to start with

prompting or having learners use just the most salient word to request. Once your learner is more proficient and independent with using a variety of mands, it is recommended to systematically increase the words they are using: "watch movie," "eat cookie," "drink juice." By adding these action words we are increasing their ability to use a variety of words to request items.

Manding is a skill that should be worked on throughout the day for early learners. When we first address manding, we should work in the student's natural environment: we call this "natural environment teaching (NET)." This gives us the opportunity to consider the child's interests and motivation moment to moment, and use them to support manding. If, for example, you are with a preschool-aged student reading a book, and they see the iPad and want to watch a movie instead, you could help them request "movie" (or "watch movie," depending on if they are using one or two words to request). Likewise, if you are with a 2-year-old non-verbal client in their home and they see a cookie up on the counter that they are motivated to eat, you could help them to successfully request "cookie."

In addition to naturally-occurring opportunities to encourage manding, structured manding sessions are also important. Some important general strategies to use when working on the skill of manding, derived from the work of Dr. Sundberg (2008) and Dr. Carbone (2007), are reflected below:

- We need to make sure that we know what items and activities are reinforcing for our student. (We've discovered this over the course of pairing.)
- Once we know what these things are we need to have access to them. This will allow our students to see the items and mand to gain access to these items. (We eventually want our students to be able to mand for something that is not in sight, like going on the swing at the park down the street, but at first we start with items that are present and visible.)
- Once we have access to the items, we want to make sure that we know what response form our students will use to communicate. (I will talk you through all possible response forms during this training.)

Below we will go through specific strategies that are important to consider when setting up manding sessions.

*Strategy 1: Teaching should occur in the student's natural environment where motivation is usually strong.*

If you have a preschool aged student, start manding in their classroom where they might be familiar with and have preferred toys and actions in the area. This might include manding to jump on a trampoline or play with bubbles. If you have an older student this may mean starting to work on manding within their classroom or school environment. This might include them

requesting to watch a movie or take a walk.

It all depends on the learner and what they are motivated to engage with at the time that you are working with them. We need to take the learner's lead and determine what they are interested in at that moment. It is important to only work on requesting items and actions that they are really excited about!

*Strategy 2: Prompt mands initially to teach the child that it's easy to get things with verbal behavior, so as to not turn the child off to communicating.*

This is such an important piece of advice. We need to use prompts so that our children realize that communication is not a laborious process – it is something that gets them what they want and need.

We need to help them learn “I do – I get.” So if they mand for bubbles with assistance, they get bubbles – the verbal message does not have to be perfect. In time, with direct and effective instruction, we will get there! If they want to jump on the trampoline, we help prompt them to communicate this at the level they are at, and then we jump.

Prompts are our way to help teach learners new skills. We provide prompts at first to show that we are there to help and then systematically fade out this prompting as the student becomes more independent with the skill.

(For more information, please return to the review of prompting, pages 8-9)

*Strategy 3: Always start work with the student requesting their most powerful reinforcers.*

We want to make sure that the student is motivated and very excited about the items or actions that we are helping them to request. For example, if we have a student who really loves dancing to music, we could work on requesting “music” or “dance.” If we have a student who really loves being outside, we could have them work on requesting outside.

Working on 5 mands initially is a general rule of thumb. We want to make sure that we work on a variety of mands so that the learner does not overgeneralize one mand. This means we do not want to teach just one mand, because the learner may try to use this one mand to mand for a variety of actions and/or items. We instead want to analyze their strongest reinforcers and start with teaching them to mand for at least 5 of those actions and/or items.

Manding for these preferred things teaches the learner that their communication is powerful. We are setting the groundwork so that they will learn that when they ask for something they will get it: “I do (request) – I get”. We do not want the learner to request items or actions that they are not interested in. (If you have a learner who is very limited in what they are interested in, please revisit the discussion of preference assessments on page 8.)

*Strategy 4: Always teach specific mands.*

We want to make sure that the mands that we are teaching are specific in nature. Examples of specific mands would include cookie, movie, walk, jump and music. Examples of general mands and mands that we do not teach first include more, please, thank you and bathroom.

We do not teach more, please, thank you and bathroom first! This is a very important point. These mands can be taught but much later, when a learner has many independent mands (at least 50).

If we pick 5 initial mands to teach and the learner is using them independently, we have broadened their vocabulary repertoire by 5 words. If we do not follow this pointer, and instead teach “more,” the student will only use the word more to mand for a variety of things – they will only have 1 mand.

Likewise, if a student mands for more, the instructor may need to ask “more of what?” This goes back to our point that a mand should stand alone. If a student mands for music, we don't need to ask “what music” – they conveyed their specific message. If a student sees bubbles and says “blow bubbles,” we know exactly what they want, because the mand was specific. If a student stands in their classroom and says “more,” the message is not conveyed as we may not know what they want more of.

*Strategy 5: Capture and contrive as many opportunities as you can to teach manding throughout the day.*

When we are working with a student who has no functional response form or a very limited response form, increasing the ability to mand or make requests should be a main focus of the student's programming – so we need to make sure that all educational staff are trained and working on manding throughout the day. This way the student can be working on manding during speech therapy sessions, but also during the time that they spend with their teacher in class, their paraprofessional if applicable, and other related service providers. This systematic and repetitive approach to teaching manding allows the student to practice more frequently, developing a more robust manding repertoire which will increase their overall spontaneous communication.

A preschool student, for example, might follow this schedule to work on manding throughout the day:

#### MANDING SCHEDULE

- Arrival to school: The student requests the center to work in that day (for example, the play kitchen center).
- Center time: The student works in the play kitchen center with the paraprofessional. The student requests for different food items to play with during this time.

- **Snack time:** The class has a choice of pretzels or goldfish, juice or water. The student requests their choices of food and drink.
- **Free time:** The class can choose to listen to music or listen to a staff member read a book. The student requests for music or book.
- **Recess:** The student plays with friends and requests that a friend or staff member push them on the swing.
- **Speech therapy session:** The SLP starts the session with a 10 minute structured manding session, where the student has choices of requesting music, boat, bubbles, and walk.
- **Time to go home:** The student is looking forward to the trip: "I want bus."

Wow, great job working on manding!! What a language enriched day!

The schedule above illustrates how many manding opportunities we can contrive and capture for students, especially if we collaborate with other educational staff.

*Strategy 6: Avoid "killing" a student's motivation for an item or activity: give some items for "free."*

This may seem like a contradiction to Strategy 5 but I assure you it is not. We want to give our students many opportunities to mand throughout their day, but we need also to be cognizant of the fact that we do not want them to feel stressed by having to request every little thing that they want. To make sure that this does not happen, we need to allow them to have some items for free or without requesting them. This happens with typical students all the time: if they want something they will find a way to get it, but that way doesn't always involve asking for it: if they want to swing, for example, they just go swing.

If we always make a student mand for a preferred item, they may conclude "It is too hard to get this item – I don't like it anymore." This can be particularly dangerous with those students who are already very limited in what they like or what they are motivated by. So, if a student loves the zoo puzzle, work on requesting the puzzle – but make sure that you also allow the student to play with it sometimes without asking for it. We want to make sure that the student continues to like the item.

#### EXAMPLE

Roshen is a second grade student who has transferred in from another country to your school district. You are the treating SLP and have paired with him and discovered what items and activities he enjoys. You are a little concerned because he only seems to show interest in two items: bubbles and chips.

You have been working on manding during your therapy time and he started out really loving this part of the session. He is communicating by using sign language, so he signs "bubbles" and "chips" when he sees and wants the items. You have been spending a lot of time working on requesting these items, and he can mand for both of them on his own. However, you have noticed that when he comes into your therapy room, he runs over and tries to open the bubbles on his own, and has then been resistant to using a sign to request them.

Roshen's behavior should be a red flag that you may be stifling his motivation for bubbles. He tries to grab them – this behavior indicates he still wants the bubbles – but he may feel fatigued by always having to ask. Pay attention to the red flag: allow him to have the bubbles for free sometimes. Maybe next time he comes to therapy, you say "bubbles" and start blowing bubbles, you do this one more time, and then the third time he mands for the bubbles. You are still working on manding for his strongest reinforcers, but you are not "killing" his motivation for them.

This ratio is very individualized, so you must analyze your each student's behavior on a case-by-case basis.

*Strategy 7: Be a giver not a taker.*

The general idea is that you do not want to take away preferred items from a student with autism: by taking away wanted items you may inadvertently motivate a student to engage in maladaptive behavior, especially a student who has limited or no functional response form.

#### EXAMPLE #1

*Don't Do This...*

Student: Is working on manding with the speech therapist at a table in his classroom. He requests to play with the Lego blocks.

SLP: Gives the student the entire bucket of Lego blocks and lets them play with them for 2 minutes.

Student: Is building a tower with the blocks and smiling.

SLP: Wants to get more work with requesting, so takes the Lego block container away and says, "What do you want?"

Student: Yells "No" and falls to the floor.

*...Do This*

Student: Is working on manding with the speech therapist at a table in his classroom. He requests to play with the Lego blocks.

SLP: Gives the student 8 Lego blocks and says, "Have fun building with the Lego blocks."

Student: Is building a tower with the blocks and

smiling. After about a minute, he has used all of the Lego blocks that he was given. He looks at the SLP and says “Lego blocks.”

SLP: “Awesome asking, here you go.” Gives the student 8 more Lego blocks.

Reflection: In the “Do This” example you are being a giver, not a taker: you are giving the student more Lego blocks. This will help you pair with the student, because you are offering items that he or she likes. By giving the student a handful of Lego blocks at a time and keeping the others in your possession, you also set up a natural motivation for the student to ask for more. In addition, the student is learning that their communication is powerful: I ask for Lego blocks, I get Lego blocks.

#### EXAMPLE #2

##### *Don't Do This...*

Student: Is sitting at a snack group with one other student that is being run by the SLP. The student requests juice.

SLP: Hands the student her juice box.

Student: Sits and eats her snack and drinks her juice for the next 5 minutes in silence.

SLP: To give the student more opportunities to request wanted items, takes away the juice box and asks, “What do you want?”

Student: Hits the SLP and has a 10 minute tantrum

##### *...Do This*

Student: Is sitting at a snack group with one other student that is being run by the SLP. The student requests juice.

SLP: Gives the student a cup and fills it up with a portion of her juice box.

Student: Sits and eats her snack and drinks the juice. When she finishes the juice in the cup, she says, “I want to drink more juice.”

SLP: Says, “Here you go,” and pours more juice into her cup. This happens 3 more times during the snack group.

Reflection: In the “Do This” example you are being a giver, not a taker: by giving the student a cup with a portion of juice, you have created a motivation for the student to ask for more juice. You have something that the student wants, and the student has a naturally occurring opportunity to ask for more.

This is a great strategy that I picked up in the field, while working as an Autism Facilitator and Support Specialist in Austin, Texas. The school district's staff had a very high level of training, and many students with autism were working systematically on the skill of

manding. It is not something that many people think about, but once you incorporate it into therapy, it can be very powerful: it allows for more opportunities to request items and actions, in hopes that there will be less maladaptive behavior and more spontaneous communication.

##### *Strategy 8: Use a rotating array of reinforcement.*

This is another strategy that I picked up in my 14 years in the field – think of it as part b to “Be a giver, not a taker.” In the examples under Strategy 7, I illustrated how to use motivating items that can be rationed into smaller portions – but you will not always be working with items that you can hand out in small doses. Hence, the strategy of using a rotating array of reinforcement was developed to contrive opportunities to work on manding without evoking problem behavior.

#### EXAMPLE

You are in a 1 on 1 session in your therapy room with an early elementary student who enjoys the following items: watching video clips on the computer, eating crackers, playing with flarp, blowing bubbles, and doing puzzles. You start with a 10 minute structured manding session.

SLP: Has computer, crackers, flarp, bubbles, and puzzles at the table. Puts the crackers in the student's view.

Student: Sees the crackers and uses his device to request, “Eat crackers.”

SLP: “Great job using your device!” and gives the student 2 crackers. After the crackers are gone, puts the puzzle in the student's view.

Student: Sees the puzzle and uses his device to request, “I want puzzle.”

SLP: “Awesome job using your words, here you go.” Gives the student the puzzle. The student is really enjoying the puzzle and plays with it for 3 minutes. Puts the bubbles in view of the student.

Student: Says, “I want the bubbles.” SLP: Blows bubbles for the student, who laughs and starts to pop the bubbles. This play goes on for a minute. Shows the student the other items she has to play with.

Student: Goes to grab the flarp and says, “Play flarp.”

SLP: Hands the student the flarp

To effectively use an array of reinforcement, we are, once again, a giver of fun things. We have a variety of preferred items available, and instead of taking away the previously used item, we merely present a different item for the student to request and engage with. (This is more difficult with students who have a limited repertoire of motivating items or actions; if you

encounter a student with a limited repertoire, please review preference assessment, on page 8.)

*Strategy 9: Teach mands when the motivation is greatest for the item or activity.*

We need to constantly observe the student's behavior to make sure that they really want what we are helping them to request.

#### EXAMPLE

A student who uses sign language to communicate is working with the speech therapist during a structured manding session in their classroom.

*Don't Do This...*

Student: Grabs for a ball.

SLP: Helps the student request "ball" by shaping their hands into the correct position to make this sign.

Student: Shakes his head and walks over to the computer.

SLP: "No. You said you wanted ball so we are playing with the ball." Tries to prompt the student to sign ball.

Student: Runs away back towards the computer and has a five-minute tantrum.

*...Do This*

Student: Grabs for a ball.

SLP: Helps the student request "ball" by shaping their hands into the correct position to make this sign.

Student: Shakes his head and walks over to the computer.

SLP: "Oh, you want the computer, that is great." Uses a partial physical prompt to help the student sign computer.

Reflection: Motivation changes in the moment, so we need to analyze our student's ongoing behavior. In the "Do This" example, when the SLP realized that the student was no longer motivated to play with the ball, she focused on his current interest and helped him sign "computer."

## Manding in the Natural Environment

By "natural environment," I mean away from a desk and chair – but this may mean something different for each student. For a preschool student, it may be in the classroom, in a centers area, etc. For an elementary student, it may be in the classroom, outside at recess, gym class, etc.

All of the examples below focus on students who are early learners and are working on acquiring a

functional response form (aka finding their voice).

#### EXAMPLE #1: PRESCHOOL

Background:

Sally, a student in your school district who has recently qualified for special education services, communicates by gesturing and by single words. She is working on increasing her ability to request wanted items and actions.

Sally loves to play in the craft center during centers time in the classroom.

Treatment:

To work on requesting in the natural environment with her, you join Sally in the classroom at the craft center.

You tell Sally that today in the center, she will be making a turkey craft, and you show her a finished product. She smiles.

You have in your possession some of the items that Sally will need to create the craft (glue stick, four different colored feathers), and Sally has the turkey body. You give Sally an orange feather and say, "Glue on your orange feather." She sees that you have the glue, so she requests "Glue." You give Sally the glue and she glues on the orange feather. She then says "Blue." You give her the blue feather and she glues it on. She continues until she has requested all of the feathers and the turkey craft is complete.

Summary:

By going into the student's classroom, you are working within a natural environment: the larger school environment. You are also using many of the strategies we have discussed above:

- By using the color word to request the feathers, you are working on specific mands
- By structuring your session around a craft Sally is eager to complete, you are allowing her to request for items that she is motivated to request.
- By presenting Sally with several steps to the craft, you are giving her different items to engage with and request.

#### EXAMPLE #2: ELEMENTARY

Background:

Jackie, a student on your caseload, uses an iPad with the application Proloquo2go. Jackie is new to using the device and requires prompts currently to request most items and actions. He is working on requesting throughout the day to help increase his overall spontaneous language.

He really loves the playground.

## Treatment:

To work on requesting in the natural environment with him, you go to Jackie's classroom five minutes before it is time for recess, greet him, and tell him that it is almost time for recess. Jackie smiles and jumps up and down: this behavior lets you know that Jackie is excited for recess.

Jackie lines up at the door with his class, and you prompt him by pointing to the correct button on his device; the device says, "recess." You say "That's right, Jackie, we are going to recess!"

Out you go to the playground. You ask Jackie "What do you want to do first?" Jackie runs over to the swings. You give Jackie a gestural prompt to press the "swing" button on his device. Given this prompt, he presses the button and hops on the swing.

He has trouble pumping his legs on his own, so he presses the "push" button on his device. You say, "Wow, Jackie, awesome using your device to request a push," and push Jackie on the swing. This routine – him requesting a push and you pushing him on the swing – lasts for five minutes.

## Summary:

By joining the student for recess, you are working within a natural environment: the playground. You are also using many of the strategies we have discussed above:

- By structuring your session around an activity Jackie is eager to engage in, you are allowing him to request for items that he is motivated to request.
- By prompting mands initially, you are demonstrating that using language gets the student what he wants

As you can see, working in the natural environment is also a great way to pair or build rapport with the student, while helping them to increase their overall spontaneous language.

## Therapy Snippet

*A preschool aged student I recently worked with was communicating by pointing, taking someone over to something he wanted, and using his behavior to protest unwanted activities. His recent full evaluation recommended that he work on increasing his ability to request wanted items and actions.*

*During our first session, I paired with the student by showing him a variety of toys that we had in the therapy room. He showed interest in bubbles, music, books, dancing, a boat toy, and cars.*

*During our initial sessions, the first 10 minutes of each session were spent pairing or building rapport with the*

*student by engaging in the student's favorite activities. We would blow bubbles, sing songs, watch videos and play with toys. He loved coming to therapy, evidenced by his happiness and eagerness to come back to the therapy room each week.*

*As I built rapport with the client, we started each therapy session with manding in the natural environment: we sat on the floor together and engaged in a manding session away from a tabletop. The student would request favorite items that were present and in his sight, as well as other items he knew were present but might not be able to see at the moment. This was a fun way to start each session, and this systematic instruction on manding helped to increase his spontaneous language use.*

*(Later in the training I will show the data sheet that I used to capture the data regarding his manding.)*

## Structured Manding Sessions

Having reviewed strategies that apply when working on manding, and manding in the natural environment, we will now focus on structured manding sessions. Structured manding sessions will take place at a table. These sessions can be completed by a teacher, paraprofessional, or speech-language pathologist in the classroom setting; they also can be completed in an individual speech therapy session in a therapy type setting.

When I am working with an early learner, I start each therapy session with a manding session. Because a student's motivation changes each and every day, this is also a time to see what the student is reinforced by on that day – so I make sure that I have a variety of reinforcers in my possession before starting the manding session.

*NOTE: Students' paraprofessionals spend a great deal of time with them daily and will be implementing a large chunk of their academic and communication programming, so the relationship you build with a student's paraprofessional or team of paraprofessionals is very important. If your student is working with a paraprofessional, you should always include this person in your therapy session (or at least for a portion of the session). This serves several purposes: it helps you build rapport with the paraprofessional (pairing is vital for all relationships!), it allows you to train the paraprofessional on the strategies you are using to address communication targets, and it gives you a chance to collaborate with the paraprofessional about how the student's communication is over the course of the school day.*

## EXAMPLE #1: SIGN LANGUAGE

### Background:

A preschool aged student is working with the speech language pathologist at their desk area within the classroom. The student is an early learner

but has been working on requesting for a couple of months now, so this session will take place at the table. The paraprofessional is also sitting with the SLP to collaborate about manding targets.

The SLP has an array of 6 things that have been identified as reinforcers in previous sessions (DVD player (movie), apple slices, chips, puzzle, bubbles, juice with cup), as well as 2 new things to offer the student to gauge their interest or motivation (light up ball, music toy).

Manding Session:

Student: Sits down next to the therapist and signs “bubbles.”

SLP: “Of course you can have some bubbles.” SLP blows bubbles

Student: Pops the bubbles with his hands.

SLP: “You are popping bubbles.”

Student: Once bubbles are gone, signs “bubbles” again.

SLP: “Blowing bubbles.” Blows more bubbles. “Pop.” “Pop.”

Student: Grabs for the new light up ball.

SLP: Models the sign for “ball” with her hands.

Student: Signs “ball” after watching the prompt from the therapist.

SLP: Gives the student the ball. “You have a ball.”

Student: Plays with the ball – hits it on the table to make it light up.

SLP: Shows student that she has the DVD player (Mickey Mouse video inside- his favorite).

Student: Smiles but continues to play with the ball.

SLP: Realizes that the student is not interested in a movie right now, so she will not have the student request this item at this time.

Student: Signs “chips.”

SLP: “Sure you can have some chips.” Hands the student some chips

Student: Eats the chips; when they are gone, signs “chips” again.

SLP: Hands the student the chips and says “Eating chips.”

Student: Eats the chips and points to the juice.

SLP: Because this is a new sign, gives the student a fully physical prompt (shapes his hand to sign “juice”), then puts some juice into a cup and hands it to the student.

Student: Drinks the juice and signs “juice.”

SLP: Pours more juice into the cup and says “Juice.” “Drinking juice.”

Highlights:

The SLP had ready access to items that the student enjoyed: the student could see the items, but was required to request each item based on his motivation for each item.

When the sign was new, the SLP prompted the student to help him communicate what he wanted: we need to prompt initial mands at first, so that communication is easy. This is how we teach students that their communication is powerful.

When the SLP presented the student with the movie and his behavior demonstrated that he was not interested, she did not prompt him to sign movie.

The SLP was a giver not a taker: she gave the student a small amount of juice in the cup instead of giving him the entire juice box and then taking it back after the student took a sip.

#### EXAMPLE #2: AUGMENTATIVE-ALTERNATIVE COMMUNICATION

Background:

The SLP is working with a middle school student who is a very early learner. He has not had access to a robust education program, so he is working on acquiring a functional response form. He is currently using a picture exchange system. He is working on using one picture to request wanted items and actions: he takes the desired picture off of the correct category page, puts it on the velcro phrase strip on the front part of his book, and hands it to the SLP.

The manding session takes place at the start of his speech therapy session at private practice. The SLP has in her possession some of his favorite things: DVD player, chips, Pete the Cat book, Gatorade, and a slinky.

Manding Session:

Student: Puts his picture book onto the table. Puts the picture of Gatorade on the sentence strip of his picture book and hands it to the therapist.

SLP: “Yeah, let’s get you some Gatorade.” Pours a small amount of Gatorade into a cup and hands it to the student.

Student: Drinks the Gatorade. Hands the sentence strip with the Gatorade icon on it to the speech therapist.

SLP: “Drinking Gatorade.” Pours another small amount of Gatorade into a cup and hands it to the student.

Student: Tries to reach for the slinky.

SLP: "You want the slinky." Goes to the toy page in the book and points to the picture of slinky.

Student: Grabs the picture, puts it on the phrase strip and hands it to the SLP.

SLP: "Here is the slinky."

Student: Plays with the slinky for 30 seconds.

SLP: Presents the student with the Pete the Cat Book. "I have Pete the Cat."

Student: Continues to play with the slinky.

SLP: "Oh, you want to play with the slinky some more."

Student: Plays with the slinky for 30 more seconds. Goes to the food page in his book, selects the chips picture, puts it on the phrase strip and hands it to the SLP.

SLP: "Chips." Gets a plate and gives the student 3 chips.

Student: Eats the chips. Hands the phrase strip to the SLP again with the word chips on it.

SLP: "Eating chips." Hands the student more chips.

Student: Points to the DVD player.

SLP: Because this is a new mand for the learner, shows the student where this is located in the book and points to the correct photo.

Student: Puts the DVD picture on his phrase strip and hands it to the SLP

SLP: "Let's watch a movie." Student and SLP watch 2 minutes of his favorite movie.

Highlights:

Again, the SLP had possession of preferred items at the start of the session, and prompted mands when the student was motivated to request an item.

Likewise, the SLP helped the student, with prompts, to find and select the correct picture so that he could request a new item.

Also, the SLP picked up on behavioral cues and did not prompt the student to request an item (the book) he was not currently motivated by. We do not want to prompt a student to ask for something that they do not want!

Finally, as before, the SLP was a giver and not a taker: she gave just a bit of Gatorade in a cup, so that when the Gatorade was gone, the student naturally requested Gatorade again.

#### EXAMPLE #3: VERBAL COMMUNICATION

An early elementary student is using 2-3 word combinations to request wanted items and actions.

The manding session takes place in the student's

classroom at their work area. The SLP has the student's favorite items in her possession at the start of the session (ball popper, sticker book, iPad, zoo puzzle).

Manding Session:

Student: Sits down with the SLP and says "Animal puzzle."

SLP: "Let's do the animal puzzle." Hands the student the puzzle with 2 animal pieces (giraffe and zebra).

Student: "I have giraffe." "Zebra." Puts the giraffe and zebra puzzle pieces into the puzzle. The puzzle makes sounds and the student smiles when each sound is played. "Put in monkey."

SLP: Hands the student the monkey. "Wow, you have the monkey."

Student: "Put in snake."

SLP: Hands the student the snake. "Snake."

Student: "Put in alligator."

SLP: "Here is the alligator." Hands the student the alligator puzzle piece; also hands the student the remaining pieces.

Student: Puts the final puzzle pieces in the puzzle. Points to the iPad.

SLP: Gives student a verbal prompt to request "Watch iPad."

Student: "Watch iPad." Pushes iPad away when SLP hands it to her.

SLP: "You want something different." Shows student the ball popper toy.

Student: Points and grabs at the item.

SLP: Gives the student a verbal prompt to say "Play ball popper."

Student: "Play ball popper."

SLP: "Here you go." Gives the student the ball popper with one red ball.

Student: Puts the red ball in the ball popper toy. "Yellow ball."

SLP: "Here is the yellow ball." Hands the student the yellow ball.

Student: "Orange ball."

SLP: "Orange ball." Hands the student the orange ball.

Student: "Purple ball."

SLP: Hands the student the purple ball.

Student: Plays with the ball popper toy for 1 minute.



SLP: Presents the student with the sticker book and iPad.

Student: "Watch iPad."

SLP: "Let's watch a video." Puts on the gonoodle website ([www.gonoodle.com](http://www.gonoodle.com)).

Student: "Watch waffle song."

SLP: "Let's watch the waffle song." Turns on and watches the waffle song.

Student: "Watch pop see ko."

SLP: "Let's watch pop see ko." Turns on and watches pop see ko.

Highlights:

As in the above examples, the SLP has possession of a variety of items that the student likes. In addition, the items lend themselves naturally to many mands within the same play activity: the puzzle has many different animals, the ball toy has a variety of colors, and the iPad contains a number of video choices.

Also as before, the SLP is aware of the student's behavior and how it impacts requesting: when the student asks for something and then pushes the item away, the SLP presents the student with two other items.

The SLP gives the student some items for free: a couple of puzzle pieces even when she hasn't asked for them. Remember that we want to make sure that we don't make students ask for each and every item or activity, as this can "kill" the motivation for that item or activity.

In all three of the examples, the SLP is teaching specific mands – remember, this is very important. We never want to teach general and vague mands, like more, please or thank you, first! We need to teach specific mands so that our students can increase their overall vocabulary skills.

Likewise, in all three of the examples, the SLP is not constantly asking "What do you want?" When we ask a student this question, we are not letting them initiate the interaction. Instead, the SLP has the motivating items present or in sight of the student, and the student uses their response form (speaking, sign, augmentative communication) to request the wanted item or action. Initiating shows them that their communication is powerful, thus increasing their overall spontaneous communication, and allows them to initiate communicative interactions with others as well. This is a very important skill for students with impaired language development!

## Manding Throughout the Day

As mentioned briefly under Strategy 5 above, we can embed opportunities to address manding throughout the typical activities an early learner may face throughout the school day and across many different environments or activities. It is important that we analyze a student's day to make sure that there are many chances for them to mand for wanted items and actions.

It is also important that we work with a student's entire team (teachers, other therapists, paraprofessionals) so that they understand what manding is and how we are addressing it.

Let's take another look at the manding schedule for the preschool student addressed under Strategy 5:

### MANDING SCHEDULE

- Arrival to school
- Center time
- Snack time
- Free time
- Recess
- Speech therapy session
- Time to go home

Arrival to school:

If possible, let the students choose the center that they want to engage with that day. By giving them an opportunity to work on requesting at the beginning of the day, we are gauging what items they are motivated to engage with that day (again, it is important to gauge a student's motivation daily, as their interest in items and activities may change). This also gives you, or the instructor they are working with, time to pair with the students: starting the day by engaging in preferred items and activities, sets a pleasant tone for the day.

Center time:

This gives the SLP many opportunities to work with students on requesting wanted items and materials. If a student chooses the writing center, for example, they could request different colored crayons, markers, scissors and glue. If the student chooses the kitchen or home center, they could work on requesting a variety of food items (eggs, donut, apple, banana).

Snack time:

Offering choices (pretzels or goldfish, juice or water) is a good way to work on requesting. This would also be a great time to remember the strategy "be a giver not a taker:" give the student a portion of the requested drink or snack rather than the whole thing; when the student finishes the portion, they can request the drink or snack again.

Free time:

Again, offering choices gives students the chance to work on requesting (listen to music or listen to a staff member read a book).

Recess:

This is a great time to work on requesting as a majority of students really love recess time. Requesting “swing” when the student approaches the playground, and then “push” when they need help getting started on the swing, are very natural mands.

Speech therapy session:

As illustrated many times above, structured manding sessions give students the chance to request specific items that motivate them: the SLP has possession of the items, and the student requests the ones they are interested in at the time.

Time to go home:

What is the student looking forward to at the end of the day – the bus ride? Seeing his dog? You can work on manding for all these items.

Thus far, we’ve mostly discussed the educational team; in addition, family involvement is crucial for our students to increase their manding skills, as well as their overall spontaneous communication skills. Just as it is important for us to collaborate with a student’s educational team, we need to include parents – they are a vital part of this team as well.

I have numerous ways in which I communicate with parents regarding their child’s communication programming and progress. If I have a new student on my caseload I always reach out via email or by phone to try and touch base with the parent regarding the student’s current communication status and any goals or concerns that the parents may have. In addition, if they are interested in getting a snapshot of what therapy is like, I have had parents come in to observe. If interested parents are unable to come in to meet face to face, I take a video of therapy to illustrate current targets (with a video permission form filled out, of course). Likewise, most of my students bring an iPad to school, so I let the parents know that I will use the student’s iPad to take video of therapy when a new skill is addressed, or when a skill has been mastered and we would like it to be generalized into the home environment. If time is a barrier to this level of communication, a very detailed progress note highlighting the specific skills addressed in therapy and the specific strategies used is also an effective means of touching base with parents.

Regardless of the method used, parents are such a very important part of the team – we need to make sure that they are included in our collaboration and communication regarding student progress.

## Therapy Snippet

*Let’s return to a client we discussed at the beginning of this course: he came to our clinic at age 8, with a dynamic communication application on his iPad that was not using functionally.*

*The first areas that we focused on with this student were pairing (building rapport) and manding (to demonstrate the power of communication). The team presented him with an array of potentially reinforcing items, including (but not limited to) potato chips, markers, a light up ball, iPad, juice, taking a walk, and a scooter. We let him interact with the items to gauge his level of interest with each item. If he seemed to be interested in the item and/or activity, I added it to his device so that he could request it. In subsequent sessions, we made the items available in his work space and prompted his initial mands (pointing to the icon on his device) so that those initial mands were easy and not effortful.*

*Early learners need many opportunities throughout the day to work on the skill of manding so that they can spontaneously request wanted items and actions across environments and with a variety of individuals. Since the student had a one-on-one paraprofessional with him all day long, I ensured that the paraprofessional was equipped to work on manding throughout the day. We addressed prompting mands so that communication is not hard, only prompting to request something when the student is showing interest in the item or activity, allowing for many opportunities throughout the day to work on requesting, starting to request in the natural environment, and being a giver not a taker.*

*Over the course of a year, this student became very proficient in using his iPad to communicate for the function of requesting.*

*At intake, this student engaged in very intense self injurious and aggressive behaviors. This is a classic example of a student not having a functional response form, and using behavior to communicate with those in his environment. He now uses his device to request wanted items and activities, label items, label actions, recall recent events, describe his current emotions, and create action object phrases. Although he is still working on safe behavior, he has had a steep decrease in the amount and intensity of unsafe behavior.*

*This case illustrates and reinforces the importance of starting with pairing and manding. The use of these evidence-based practices, and a collaborative team approach, have allowed a hard-working student to develop his language and use it effectively with a variety of individuals. Systematic implementation of work on manding has helped him increase his spontaneous language, decrease his maladaptive behavior, and find his voice.*

# Next Stop: Data Collection, Evaluation, and Goal-Setting

## Data Collection

We have established the importance of systematic instruction on the skill of manding and have worked through a variety of examples above. Now we will discuss various ways that we can capture data on this skill.

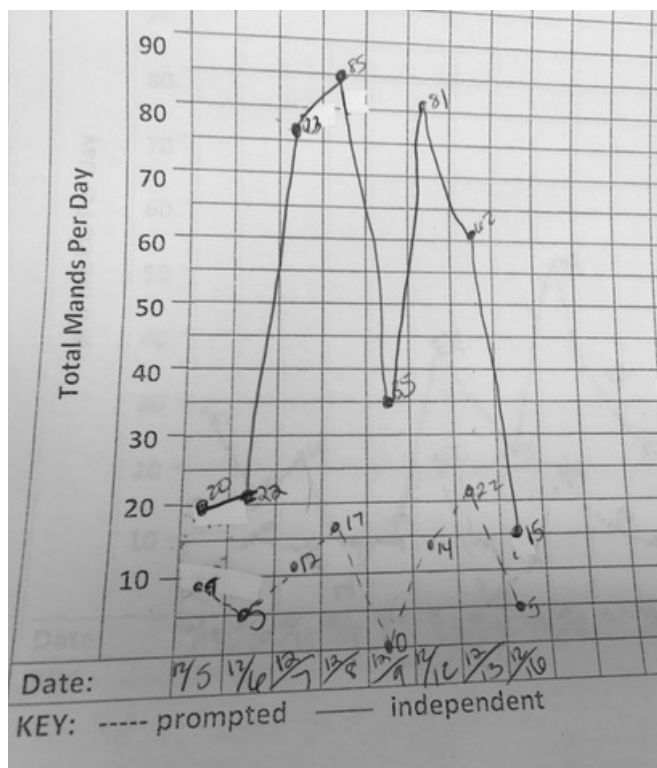
If we take time from a student's day to target a skill, we need to first gather information regarding how often the student is engaging in that behavior prior to treatment – we will call this our “baseline.” This baseline will be different for each and every student with whom you work. For example, if a student does not have a functional response form, he may not be effectively manding for wanted items and actions throughout the day. In this case, we would say that the student is using 0 independent mands per day – in other words, his baseline is 0 independent mands per day. (This is a very simplistic introduction of what taking a baseline entails – a full discussion is beyond the scope of this course.)

Once a baseline of manding is captured, we need to decide how to effectively track this skill throughout the student's school day. We want to make sure that we take data daily and record it, so that we can analyze the data to see how the student is progressing. In addition, because manding is a skill that should be worked on by a variety of people in the student's life, we need to make sure that data collection is easy, and gives us information that is valuable.

One way to collect data on manding is to count prompted vs. unprompted mands. This can be done by having a section on a student's daily data sheet where this information can be tallied:

1.1 Request Items	<i>We will present Student with items that we think he might like and give him the opportunity to request them.</i>	Student will, either with verbalizations or his iPad, request the wanted items.	Independent  Prompted
-------------------	---	---	-----------------------------

This daily data sheet travels with the student. The speech-language pathologist, the classroom teacher, the paraprofessional, etc., all track data on the sheet. The data on mands can then be graphed daily to give us a visual analysis of progress with this skill.



If making tally marks throughout the day is too cumbersome, clickers are another option. Two clickers – one labeled “prompted” and the other “unprompted” – can be used by all staff members who work with a student throughout the day. If the student uses an independent mand, we click the unprompted clicker. If the mand is prompted, we click the prompted clicker. At the end of the day, we can note these numbers and put them into a visual analysis graph to track progress.



Another way to capture data specifically for a student who is using sign language is to use the data sheet created by the Central Texas Autism Center, below. It gives a clear illustration of the manding level needed by the learner when requesting using sign language.

**TRIAL BY TRIAL SIGN MAND DATA SHEET**

**Instructions:** List the reinforcer at the top of each column and record trial by trial the prompt level necessary to evoke the mand response. Vocal approximations can be recorded under the circled prompt level.

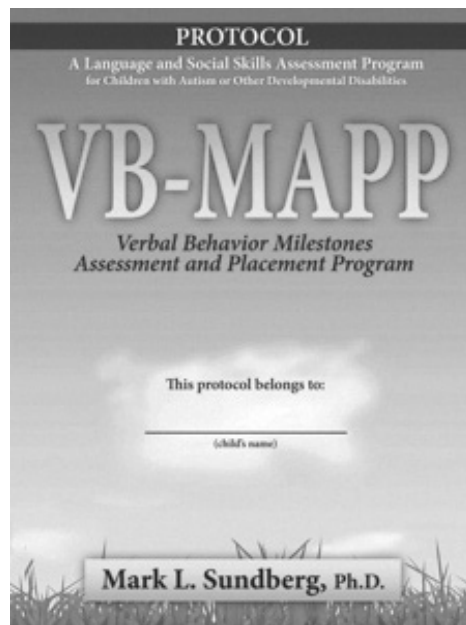
FPP- Full Physical Prompt      PPP- Partial Physical Prompt      GP- Gestural Prompt  
 V- Vocal      ITEM- Item Present      SP- Spontaneous

Sr+		Sr+		Sr+		Sr+		Sr+	
1	FPP PPP GP V ITEM MO	1	FPP PPP GP V ITEM MO	1	FPP PPP GP V ITEM MO	1	FPP PPP GP V ITEM MO	1	FPP PPP GP V ITEM MO
2	FPP PPP GP V ITEM MO	2	FPP PPP GP V ITEM MO	2	FPP PPP GP V ITEM MO	2	FPP PPP GP V ITEM MO	2	FPP PPP GP V ITEM MO
3	FPP PPP GP V ITEM MO	3	FPP PPP GP V ITEM MO	3	FPP PPP GP V ITEM MO	3	FPP PPP GP V ITEM MO	3	FPP PPP GP V ITEM MO
4	FPP PPP GP V ITEM MO	4	FPP PPP GP V ITEM MO	4	FPP PPP GP V ITEM MO	4	FPP PPP GP V ITEM MO	4	FPP PPP GP V ITEM MO
5	FPP PPP GP V ITEM MO	5	FPP PPP GP V ITEM MO	5	FPP PPP GP V ITEM MO	5	FPP PPP GP V ITEM MO	5	FPP PPP GP V ITEM MO
6	FPP PPP GP V ITEM MO	6	FPP PPP GP V ITEM MO	6	FPP PPP GP V ITEM MO	6	FPP PPP GP V ITEM MO	6	FPP PPP GP V ITEM MO
7	FPP PPP GP V ITEM MO	7	FPP PPP GP V ITEM MO	7	FPP PPP GP V ITEM MO	7	FPP PPP GP V ITEM MO	7	FPP PPP GP V ITEM MO
8	FPP PPP GP V ITEM MO	8	FPP PPP GP V ITEM MO	8	FPP PPP GP V ITEM MO	8	FPP PPP GP V ITEM MO	8	FPP PPP GP V ITEM MO
9	FPP PPP GP V ITEM MO	9	FPP PPP GP V ITEM MO	9	FPP PPP GP V ITEM MO	9	FPP PPP GP V ITEM MO	9	FPP PPP GP V ITEM MO
10	FPP PPP GP V ITEM MO	10	FPP PPP GP V ITEM MO	10	FPP PPP GP V ITEM MO	10	FPP PPP GP V ITEM MO	10	FPP PPP GP V ITEM MO

Percentage by Prompt Level:

FPP _____	FPP _____	FPP _____	FPP _____	FPP _____
PPP _____	PPP _____	PPP _____	PPP _____	PPP _____
GP _____	GP _____	GP _____	GP _____	GP _____
V _____	V _____	V _____	V _____	V _____
ITEM _____	ITEM _____	ITEM _____	ITEM _____	ITEM _____
MO _____	MO _____	MO _____	MO _____	MO _____

Central Texas Autism Center, Inc.  
 used with permission



The VB-MAPP, created by Dr. Mark Sunderberg, is based on B.F. Skinner's 1957 analysis of verbal behavior, established developmental milestones, and research from the field of behavior analysis. It is a criterion referenced assessment tool, curriculum guide, and skill tracking system that is designed for children with autism or other developmental disabilities. There are multiple components of the VB-MAPP which collectively provide a baseline level of performance, a direction for intervention, a system for tracking skill acquisition, and a framework for curriculum planning. It contains 170 measureable learning and language milestones that are sequenced and balanced across 3 developmental levels:

- Level 1: 0-18 months
- Level 2: 18-30 months
- Level 3: 30-48 months

Areas of assessment include Manding, Tacting, Listener Responding, Visual Perceptual Skills and Matching to Sample, Independent Play, Social Behavior and Social Play, Motor Imitation, Echoic Skills, Spontaneous Vocal Behavior, Listener Responding By Function, Feature and Class, Intraverbal, Classroom Routines and Group Skills, Linguistic Structure, Reading, Writing, Linguistic Structure, and Math. In addition to the previously-mentioned skills assessments, an Early Echoic Skills Assessment (created by Dr. Barbara Esch), Barriers Assessment, and Transition Assessment are all included. Interested learners can find the assessment, as well as additional information, at [www.avbpress.com](http://www.avbpress.com).

Let's look briefly at the mand section of the VB-MAPP, which lets us evaluate if our learner is at level 1, 2 or 3 as far as manding skills. A student who is at the beginning of level 1 for manding will be using mands, but may only do so when a prompt is given; a learner towards the end of level 1 for manding may use 10 different mands independently. A level 2 student may start manding for missing items independently (i.e. a missing item needed in class or a missing part to a toy or activity) up through manding for novel items without being trained to do so in a therapy session. A level 3 student may be able to mand for verbal information using a variety of "wh" question forms up through manding for others to attend to his/her own verbal behavior (i.e. "listen to this"). This evaluation shows us where our student falls within these milestones and allows us to plan effective therapy to increase manding and overall spontaneous language.

### Goal-Setting

We've completed our assessment, we know where to begin with manding instruction, and we have an idea of where we want our student to be within a year. Now we need to set goals for our student. These goals need to be clear and detailed, they need to be functional (targeting skills that are important in the student's everyday life), and they need to make sense to all the team members who will be working with this student.

As a school based speech therapist, goal writing is a very important part of my job! Here are several examples:

**EXAMPLE #1:** A preschool aged student (Zoey) is starting at your center based preschool. Previously, in an early intervention program, the student was working on requesting with sign language and can request one thing: more. You want to expand this student's manding repertoire, so that she is requesting specific items.

**Goal:** When presented with a preferred item or action Zoey will use sign language to request it, working towards 10 different items or actions without prompting.

This goal tells people exactly how to work on this skill. We will teach Zoey to use her sign language to request specific things instead of general things: if she likes walks, music and cereal, we will work on using signs for walks, music and cereal. The number 10 gives us a quantity to work towards throughout the year. The instructor will have access to the preferred items or actions, and we will keep specific data so we stay up-to-date on which items Zoey can request on her own.

**EXAMPLE #2:** An 8 year old student (Natalie) has transferred in from an out of state school. The student has a communication device and independently uses twelve requests throughout the day. The team would like Natalie to increase her spontaneous communication

**Goal:** Natalie will increase her ability to independently request items and/or actions with her augmentative communication device, as evidenced by using 50 unprompted mands across her school day.

This goal lets the team know that we are going to take data on manding across the entire school day. Since we're specifically working towards unprompted mands, we'll want to look at prompted vs. unprompted mand data. Perhaps, as in the tactic discussed in Data Collection above, the team could use two clickers to collect the data.

**EXAMPLE #3:** A 10 year old student (Joe) communicates verbally, but is having many behavioral issues. The board certified behavior analyst on the team has stated that Joe wants things throughout the day but cannot use his language to get them. The speech language pathologist, board certified behavior analyst, and intervention specialist collaborate on goal-setting.

**Goal:** Joe will increase his ability to request wanted items and actions 50% over current baseline by the end of the current IEP.

For this goal, we will need to find Joe's current baseline for manding throughout the day. Let's say that we determine as a team, over a few days, that he is using 14 unprompted mands per day. Now we can revise the goal using additional specifics: we would like Joe to be able to independently request 21 times over the course of the day by the end of the IEP plan.

## Last Stop: Case Studies

Now that we have discussed how to address manding in depth, we will put all of this information together to analyze case scenarios that happen in the real world: working on synthesizing information and problem solving systematically makes for easier implementation into your daily therapeutic practice.

### CASE STUDY #1:

Hemmi is a new student on your caseload. He is a three year old male with autism. You have heard Hemmi say a handful of words during center time when he is playing by himself with toys, but he does not use his language functionally throughout his school day. The teacher needs your input regarding what should be the main focus of his time in the classroom.

### Recommendations:

It is wonderful that Hemmi is already communicating verbally, but if he is not telling his teacher his wants and needs throughout the course of his day, this is where we need to start.

We will want to make sure that the SLP and teacher are paired with Hemmi: they have a good rapport with him and know what types of things he enjoys interacting with.

Next we will start to work on manding within the natural environment – his classroom. Perhaps center time, as he seems to prefer it, is the place to practice this skill. If Hemmi really loves the play center with a toy garage, race track, and cars, this would be a great place to start: we could have Hemmi ask for cars or items that he would like to play with. We want him to learn that manding is easy, fun, and effective, so remember to prompt him at first!

#### CASE STUDY #2

You sit down with a student to work on manding in the classroom environment. You have out 3 items -- bubbles, an iPad, and juice. The student requests the iPad. You give the student the iPad and let her play with it for 2 minutes. After the 2 minutes are up you take it back, say “iPad is all done,” and then ask her what she wants. Before you can finish your sentence she falls to the floor and starts having a tantrum. What went wrong – what could you have done differently?

Recommendations:

This is such a common scenario and a very easy mistake to make. In the example above, we went against a very important rule of manding: “Be a giver not a taker.”

Remember that you want to be in possession of the preferred items during structured manding trials. If the student asks for the iPad, perhaps you keep control of it – this way when the activity is over is not up to the student. Or, if you do give the student access to the iPad to watch a 2 minute video, you do not take it back and say “all done” at the end. Instead, when the time for the video to be finished is nearing, you hold up other potentially reinforcing items, per our related strategy of having a rotating array of reinforcement available.

We don’t want to take preferred items away, as this can motivate students to engage in maladaptive behavior to get access to them – especially when they have difficulty expressing their wants and needs.

#### CASE STUDY #3

Samuel is a new student on your caseload. He is 5 years old and non verbal. The teacher is reporting that he gets upset at snack time and attempts to grab the food items from the teacher and other students. You go in to do an observation, and learn that Samuel does not request wanted items at snack. Instead, the paraprofessional running the group decides for each student what they will have on that date. She passes out the snacks and does not give

the students a choice or a chance to request even though the teacher has a variety of snacks in her snack area. What should be done so that Samuel has more opportunities to practice the skill of manding?

Recommendations:

This is a complicated scenario.

Getting all staff on board with how to run snack group is the first very important step. We need to talk with the teacher and paraprofessional regarding the set up snack, adjusting the environment so that it is conducive to working on the skill of manding. In other words, we need to make sure that the students can have a choice of snacks.

Now that the staff is on the same page, we need to give Samuel a functional way to request wanted items. In therapy, we could trial the best response form for him: perhaps we start with sign language, as it is similar to verbalizations, and we can prompt it for Samuel if he is not communicating at this time. The paraprofessional can hold up a choice of 2 items, gauge Samuel’s interest in the items, and help prompt him to request his choice.

This type of daily practice will help to increase his overall spontaneous manding behavior.

#### CASE STUDY #4

Sarah is a 3 year old girl with autism on your caseload who has transferred from another district. The notes sent by the other SLP mention that she is working on signing “more” and “thank you.” When you work with her she signs “more” when she wants to request a variety of items. How could you make therapy more effective?

Recommendations:

This is something that happens all too often: educators and therapists often start by teaching general signs like more and thank you.

This goes against one of the strategies that we discussed above: teaching specific mands. We want to teach mands – in this case, signs – for a variety of preferred items and/or actions. If we are able to teach Sarah to request specific items and/or actions, we are making her a more independent and effective communicator.

Let’s say that we start by teaching her 5 new signs, to include bubbles, movie, crunchy, milk, and jump. If we are successful in teaching her these new mands, we have increased her vocabulary by 5 words! In addition, any time that she were to mand for one of these items, the people in her environment would know exactly what she wanted, whereas if she were only requesting “more” we would be confused about what she wanted “more” of.

## CASE STUDY #5

Juan is a 9 year old student who has moved into your district from another country. He has no functional way to communicate with others in his environment. He has a pleasant personality and enjoys watching movies, eating snacks, talking walks and going for dance breaks. When you see him you usually work with him in the therapy room, so that his one on one paraprofessional can have a break. He is making such great progress during sessions and can now independently request dance, walk, chip and movie using sign language and with minimal prompting. But after 2 months of school, the teacher comes to you and shares concerns about the fact that Juan has no way to communicate. What might be a problem with this scenario? What could we do to better serve Juan?

Recommendations:

It is great that Juan is making progress during therapy sessions. We also need to consider the strategy of making sure that Juan has many opportunities to practice manding throughout his day.

It is so very important for Juan to practice his manding across environments and across individuals. In order for this to occur, we need to make our services more systematic.

We should have a meeting with the classroom teacher and the paraprofessional, sharing what items and actions Juan is requesting and with what prompting level. (If the staff are not aware of manding and how to work on this skill, some time should be allotted to go over this as well.)

We should work with the classroom staff to create a visual manding schedule to help identify times that Juan could work on this skill throughout his school day. We could also talk to the staff about the easiest and most efficient way to capture data on Juan's manding, so that we can make informed decisions about Juan's communication programming.

The above actions will allow for a more robust communication curriculum for Juan and should help to increase his overall manding and spontaneous use of language.

## Conclusion

---

Thanks so much for coming on this journey with me today. Speech-language pathologists have a very important job – helping students find their voice and communicate more effectively with the world – but sometimes this can seem like a daunting and overwhelming task. The techniques and strategies presented in this course can help make the process easier and more systematic in nature.

I am eager for you to implement these strategies into your daily therapeutic practice!

## HANDOUT: Verbal Behavior Strategies for Increasing Manding

---

**Strategy 1: Teaching should occur in the student's natural environment where motivation is usually strong.**

Remember, we first need to build rapport with the student in their natural environment so that we know what items and activities they are motivated to engage with. You want to become a person they have fun with and look forward to seeing.

Once we have established this relationship, we can help them request wanted items and actions in their natural environment.

**Strategy 2: Prompt mands initially to teach the child that it's easy to get things with verbal behavior, so as to not turn the child off to communicating.**

For most students starting work on manding, this may be the first time they are learning how to use a functional response form, whether it is sign, pictures, augmentative communication, verbalizations or a combination of these. We will use a variety of prompts based on their level of need and the way in which they are communicating. We need to make certain that they realize that communication is powerful and fun!

**Strategy 3: Always start work with the student requesting their most powerful reinforcers.**

**Strategy 4: Always teach specific mands.**

We should always start with manding for specific and powerful reinforcers, targeting 3-5 initial mands if possible. If you have a student with a limited amount of reinforcers, remember to use a preference assessment.

**Strategy 5: Capture and contrive as many opportunities as you can to teach manding throughout the day.**

These opportunities to practice are so essential to a

student increasing their manding and spontaneous communication. Setting up a schedule for all staff to follow in reference to different activities and what the student could mand during those activities can help increase the opportunities for manding throughout the day.

**Strategy 6: Avoid “killing” a student’s motivation for an item or activity: give some items for “free.”**

We don’t want students to feel that they have to ask for each and every puzzle piece, or each and every chip they want for snack. Practice is important, but we also need to give some items for free. This will help the student feel that communication is not too effortful and overwhelming.

**Strategy 7: Be a giver not a taker.**

This is such a key strategy! Please do not take things from students who are nonverbal. Sometimes the only way they know how to communicate is with their behavior, which may be falling on the floor or having a tantrum. If a student wants a pretzel, give them a couple and not the whole bag. Once they eat the pretzels you gave them, they will be motivated to ask for more pretzels on their own. If a student requests a movie, show a short clip on your computer and control the buttons yourself. If you let the student watch a ten minute movie clip or give them their iPad to watch the movie, it may be very difficult to transfer to working on manding for other items or activities.

**Strategy 8: Use a rotating array of reinforcement.**

This strategy goes with Strategy 7. Instead of taking away an item, present another item or activity that is also motivating. If the student wants to engage with the item or activity they will request it. It is important to have this array of reinforcement in your possession, so that students need to request to gain access to the item or activity. This will help to increase the amount of practice they get with manding.

**Strategy 9: Teach mands when the motivation is greatest for the item or activity.**

Only prompt mands when the student is motivated for the item or activity. So if a student really wants to watch a movie, this is a great time to work on requesting “movie” or “watch movie.” If a student really wants to take a walk, this is not a great time to work on requesting “movie.” We need to analyze the students’ behaviors to help gauge what they are motivated for and help them request it appropriately.

## Web Resources

---

ABV Press, LLC

<http://www.avbpress.com/>

Amy McGinnis Behavioral Consulting - Downloads

<http://amymcginnis.com/downloads/>

ASHA’s Practice Portal – Autism Spectrum Disorder

<http://www.asha.org/Practice-Portal/Clinical-Topics/Autism/>

Carbone Clinic

<http://www.carboneclinic.com/>

Central Texas Autism Center

<http://www.ctac1.com/index.html>

Dr. Mary Barbera

<http://marybarbera.com/>

Establishing Operations Inc.

<http://www.establishingoperationsinc.com/>

GoNoodle.com

<https://www.gonoodle.com/>

National Standards Project, Phase 2 – Report

<http://www.nationalautismcenter.org/national-standards-project/phase-2/>



## References

- Barbera, M. L., & Rasmussen, T. (2007). *The verbal behavior approach: how to teach children with autism and related disorders*. London: Jessica Kingsley.
- Carbone, Vincent EdD (2007). Teaching Verbal Behavior to Children with Autism and Other Disabilities. Presented in Austin, Texas at 2 day workshop. Published at The Carbone Clinic.
- Cooper J.O, Heron T.E, Heward W.L. Applied behavior analysis (2nd ed.) Upper Saddle River, NJ: Pearson; 2007.
- Ingvarsson, Einar (2016). Tutorial: Teaching Verbal Behavior to Children with ASD. *International Electronic Journal of Elementary Education* 2016: 9(2): 433-450.
- Miltenberger R. Behavior modification: Principles and procedures (4th ed.) Belmont, CA: Wadsworth; 2007.
- National Autism Center's national standards project: findings and conclusions: addressing the need for evidence-based practice guidelines for autism spectrum disorders*. (2009). Randolph, MA: National Autism Center.
- Skinner B.F. Science and human behavior. New York: Macmillan; 1953.
- Sundberg, M. L. (2008). *VB-MAPP: verbal behavior Milestones assessment and placement program: a language and social skills assessment program for children with autism or other developmental disabilities*. Concord CA: AVB Press.
- Tager-Flusberg H, Kasari C. Minimally verbal school-aged children with autism spectrum disorder: the neglected end of the spectrum. *Autism Research* 2013;6(6):468-78. [PUBMED: 24124067]
- Tager-Flusberg, H., Paul, R., & Lord, C. (2005). Language and communication in autism. In F. Volkmar et al. (Eds.), *Handbook of Autism and Pervasive Developmental Disorders* (pp.650-681). Hoboken, NJ: John Wiley & Sons. Page 347
- Wood- Rich, Kelle ( 2007). Trainer of Trainer Modules on The Science of Applied Behavior Analysis and Verbal Behavior. Presented in Leander, Texas over the course of the 2007-2008 school year. Published at the Central Texas Autism Center.

## HELPING STUDENTS WITH AUTISM FIND THEIR VOICE

(3 CE HOURS)

### FINAL EXAM

1. For the purposes of this course, “early learners” are defined as \_\_\_\_\_.
  - a. Children 5 and under
  - b. Children 12 and under
  - c. Children 18 and under
  - d. Students who may be nonverbal or very limited verbally
2. Which of the following is NOT one of the evidence-based practices for individuals with autism referenced by the American Speech-Language-Hearing Association (ASHA)’s practice portal?
  - a. SLPs can help individuals with autism by ensuring they have a functional communication system
  - b. SLPs should discourage family involvement in the treatment process, to ensure a high level of professionalism
  - c. SLPs should help students use their communication in a variety of settings and with a variety of communicative partners
  - d. SLPs should use a systematic approach to taking data
3. When discussing the science of applied behavior analysis (ABA), a/an “\_\_\_\_\_” is a stimulus that follows a behavior of interest.
  - a. Antecedent
  - b. Behavior
  - c. Consequence
  - d. Motivation
4. A student learns to label “cookie” in the classroom and subsequently labels it while out to eat with his parents at a restaurant. When discussing the science of applied behavior analysis (ABA), this is called a/an “\_\_\_\_\_.”
  - a. Generalization
  - b. Multi modal communication
  - c. Prompt
  - d. Reinforcement

5. **The National Standards Report, issued by the National Standards Project (NSP), reviews interventions and shares which have been shown to be effective for individuals with autism spectrum disorder. The Report recognizes behavioral-based approaches – including ABA – as \_\_\_\_\_.**
- A discredited form of treatment
  - An emerging form of treatment
  - An established form of treatment
  - An unestablished form of treatment
6. **Applied behavior analysis (ABA) uses a three-term contingency to analyze human behavior. A three-term contingency can \_\_\_\_\_.**
- Illuminate undesirable behaviors: Antecedent = work is presented; Behavior = student clears the table; Consequence = student gets out of work
  - Reinforce verbal behavior: Antecedent = student sees a cookie; Behavior = student says “cookie;” Consequence = student gets a cookie
  - Both of the above
  - Neither of the above
7. **Verbal operants refer to the different ways that we use our communication. “Filling in the blank” and “answering questions” are both examples of \_\_\_\_\_.**
- Echoics
  - Intraverbals
  - Manding
  - Tacting
8. **Work on this operant can help a learner say many different functional words by repeating what is heard, usually immediately.**
- Echoics
  - Intraverbals
  - Listener Behavior
  - Manding
9. **\_\_\_\_\_ is the only verbal behavior that immediately benefits the speaker: I say something, I get something.**
- Intraverbals
  - Listener Behavior
  - Manding
  - Tacting
10. **During rapport-building time, it is important \_\_\_\_\_.**
- To begin to use direct instruction
  - To discover what your clients like to do for fun
  - To present your clients with questions to answer and items to label
  - All of the above
11. **When working with prompting while manding, the prompt should be \_\_\_\_\_.**
- Part of the antecedent, added before the learner has a chance to respond
  - Part of the behavior, added after the learner’s incorrect first response
  - Physical or gestural only
  - Vocal only
12. **If the learner is currently nonverbal and has no functional response form, we will start work on manding with \_\_\_\_\_.**
- Using just the most salient word to communicate: “iPad”
  - Using just the verb to communicate: “want”
  - Using subject + verb + object to communicate: “I want iPad”
  - Using verb + object to communicate: “want iPad”
13. **Which of the following is NOT one of the general strategies to use when working on the skill of manding outlined by Dr. Sundberg?**
- Have access to reinforcing items, to allow the student to see and mand for them
  - Know what items and activities are reinforcing for the student
  - Know what response form the student will use to communicate
  - Select at least 10 mands to work on initially
14. **Strategy 1: Teaching should occur in the student’s natural environment where motivation is usually strong. Which statement best supports this strategy?**
- The student must learn to focus on items other than what s/he is interested in at that moment
  - The use of prompting discourages early learners from manding
  - With a preschool aged student, you might start manding in the classroom, where s/he already has preferred toys and actions
  - All of the above
15. **Strategy 2: Prompt mands initially to teach the child that it’s easy to get things with verbal behavior, so as to not turn the child off to communicating. Which statement best supports this strategy?**
- If they mand for bubbles with assistance, they get bubbles – the verbal message does not have to be perfect
  - Prompts are our way to help teach learners new skills
  - We need to help students learn “I do – I get”
  - All of the above

16. **Strategy 3: Always start work with the student requesting their most powerful reinforcers. Which statement best supports this strategy?**
- If we have a student who really loves dancing to music, we could work on requesting “music” or dance”
  - We should start by teaching just one mand, such as “more,” that can be generalized
  - The student must learn to request items or actions that s/he is not interested in
  - All of the above
17. **Strategy 4: Always teach specific mands. Which statement best supports this strategy?**
- A mand should not stand alone
  - If a student mands for more, the instructor may need to ask “more of what?”
  - Teach more, please, thank you and bathroom first
  - All of the above
18. **Strategy 5: Capture and contrive as many opportunities as you can to teach manding throughout the day. Which statement best supports this strategy?**
- A manding schedule can help contrive and capture manding opportunities for students
  - A systematic and repetitive approach to teaching manding allows the student to practice more frequently
  - Make sure that all educational staff are trained and working on manding throughout the day
  - All of the above
19. **Strategy 6: Avoid “killing” a student’s motivation for an item or activity: give some items for “free.” Which statement best supports this strategy?**
- If a student can mand for a specific item, it is no longer important that s/he continue to like it.
  - If we always make a student mand for a preferred item, s/he may conclude “It is too hard to get this item – I don’t like it anymore.”
  - To give our students many opportunities to mand throughout their day, we need them to request everything that they want.
  - All of the above
20. **Strategy 7: Be a giver not a taker. Which statement best supports this strategy?**
- Taking away wanted items is a recommended way to encourage a student to mand for them
  - Taking away wanted items is a recommended way to encourage a student to mand for other items
  - Taking away wanted items may inadvertently motivate a student to engage in maladaptive behavior
  - All of the above
21. **Strategy 8: Use a rotating array of reinforcement. Which statement best supports this strategy?**
- Be sure to have a variety of preferred items available
  - Instead of taking away a preferred item, present a different preferred item for the student to request and engage with
  - Think of this strategy as part b to “Be a giver, not a taker”
  - All of the above
22. **Strategy 9: Teach mands when the motivation is greatest for the item or activity. Which statement best supports this strategy?**
- Constantly observe students’ behaviors to make sure that they really want what we are helping them to request
  - Ensure that a student is able to mand for an item without prompting before moving on to another item
  - Students should not be allowed to change focus from one preferred item to another
  - All of the above
23. **The use of a Manding Schedule best supports which strategy?**
- Strategy 3: Always start work with the student requesting their most powerful reinforcers
  - Strategy 4: Always teach specific mands
  - Strategy 5: Capture and contrive as many opportunities as you can to teach manding throughout the day
  - Strategy 6: Avoid “killing” a student’s motivation for an item or activity: give some items for “free”
24. **The following “Don’t Do This” example best supports which strategy?**  
*Student: Is sitting at a snack group with one other student that is being run by the SLP. The student requests juice.*  
*SLP: Hands the student her juice box.*  
*Student: Sits and eats her snack and drinks her juice for the next 5 minutes in silence.*  
*SLP: To give the student more opportunities to request wanted items, takes away the juice box and asks, “What do you want?”*  
*Student: Hits the SLP and has a 10 minute tantrum*
- Strategy 1: Teaching should occur in the student’s natural environment where motivation is usually strong
  - Strategy 3: Always start work with the student requesting their most powerful reinforcers
  - Strategy 5: Capture and contrive as many opportunities as you can to teach manding throughout the day
  - Strategy 7: Be a giver not a taker

**25. In general, structured manding sessions**

- \_\_\_\_\_.
- a. Should exclude your students' paraprofessionals
  - b. Should only be completed by a speech-language pathologist in a therapy type setting
  - c. Take place at a table
  - d. Take place away from a desk and chair

**26. Which of the following is NOT a tactic that allows students to work on manding throughout the day?**

- a. Eliminating choices from snack time and free time
- b. Giving the student an opportunity to work on requesting at the beginning of the day to gauge what items s/he is motivated to engage with that day
- c. Incorporating a manding schedule
- d. Orienting a student's entire team to what manding is and how it is being addressed

**27. If we take time from a student's day to target a skill, we need to first gather information regarding how often the student is engaging in that behavior prior to treatment – we will call this our "\_\_\_\_\_."**

- a. Baseline
- b. End result
- c. Goal
- d. Strategy

**28. The Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP) \_\_\_\_\_.**

- a. Contains 170 measureable learning and language milestones that are sequenced and balanced across 3 developmental levels
- b. Does not take into account research from the field of behavior analysis
- c. Overlooks the skill of manding
- d. Was created by B.F. Skinner in 1957

**29. In the mand section of the Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP), a level 1 student \_\_\_\_\_.**

- a. May be able to mand for others to attend to his/her own verbal behavior (i.e. "listen to this").
- b. May be able to mand for verbal information using a variety of "wh" question forms
- c. May start manding for missing items independently
- d. May use 10 different mands independently

**30. The manding goals that we set with our students need to \_\_\_\_\_.**

- a. Be as general as possible
- b. Be non-specific
- c. Make sense to all the students' team members
- d. None of the above

# ANSWER SHEET

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_

State: \_\_\_\_\_ ZIP: \_\_\_\_\_ Country: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

ASHA membership #: \_\_\_\_\_

Other: License/certification # and issuing state/organization \_\_\_\_\_

Clinical Fellow: Supervisor name and ASHA membership # \_\_\_\_\_

Graduate Student: University name and expected graduation date \_\_\_\_\_

\*\* See instructions on the cover page to submit your exams and pay for your course.

By submitting this final exam for grading, I hereby certify that I have spent the required time to study this course material and that I have personally completed each module/session of instruction.

## Helping Students with Autism Find Their Voice Final Exam

- |                    |                     |                     |                     |                     |
|--------------------|---------------------|---------------------|---------------------|---------------------|
| 1. (A) (B) (C) (D) | 7. (A) (B) (C) (D)  | 13. (A) (B) (C) (D) | 19. (A) (B) (C) (D) | 25. (A) (B) (C) (D) |
| 2. (A) (B) (C) (D) | 8. (A) (B) (C) (D)  | 14. (A) (B) (C) (D) | 20. (A) (B) (C) (D) | 26. (A) (B) (C) (D) |
| 3. (A) (B) (C) (D) | 9. (A) (B) (C) (D)  | 15. (A) (B) (C) (D) | 21. (A) (B) (C) (D) | 27. (A) (B) (C) (D) |
| 4. (A) (B) (C) (D) | 10. (A) (B) (C) (D) | 16. (A) (B) (C) (D) | 22. (A) (B) (C) (D) | 28. (A) (B) (C) (D) |
| 5. (A) (B) (C) (D) | 11. (A) (B) (C) (D) | 17. (A) (B) (C) (D) | 23. (A) (B) (C) (D) | 29. (A) (B) (C) (D) |
| 6. (A) (B) (C) (D) | 12. (A) (B) (C) (D) | 18. (A) (B) (C) (D) | 24. (A) (B) (C) (D) | 30. (A) (B) (C) (D) |

**Accessibility and/or special needs concerns?**  
**Contact customer service by phone at (888) 564-9098**  
**or email at [support@pdhacademy.com](mailto:support@pdhacademy.com).**

**Refund and general policies are available online at**  
**<http://pdhacademy.com/policies/>**

# Helping Students with Autism Find Their Voice (3 CE HOURS)

## COURSE EVALUATION

Learner Name: \_\_\_\_\_

	Disagree			Agree		
Orientation was thorough and clear	1	2	3	4	5	
Instructional personnel disclosures were readily available and clearly stated	1	2	3	4	5	
Learning objectives were clearly stated	1	2	3	4	5	
Completion requirements were clearly stated	1	2	3	4	5	
Content was well-organized	1	2	3	4	5	
Content was informative	1	2	3	4	5	
Content reflected stated learning objectives	1	2	3	4	5	
Exam assessed stated learning objectives	1	2	3	4	5	
Exam was graded promptly	1	2	3	4	5	
Satisfied with learning experience	1	2	3	4	5	
Satisfied with customer service (if applicable)	1	2	3	4	5	n/a

What suggestions do you have to improve this program, if any?

---

---

What educational needs do you currently have?

---

---

What other courses or topics are of interest to you?

---

---