

Concepts and Protocols for Advanced Mand Training for Students with Autism

Michael Miklos

PATTAN

Autism Initiative ABA Supports

The mand

- A little nugget of a verbal operant:
“You want something, you say it, you get it!”
- Mands are a constant part of our social life...got that?
- Often we can work with such an analysis; but there is a lot more to building mand skills as an integrated component of an effective repertoire of speaker and listener skills.

A word of caution...

Dave Palmer: behavior analysis as an interpretive science

- The moon and tides
- Freud and the unknown history of the individual
 - No established principles (functional relations)
- The ethologists and the ignoring of details
 - The overextension of established principles of the evolution of species
- **Interpretive science involves extensions of established principles**

Some of what I will be covering is not supported by direct research; rather it is derived from an interpretive science

The Mand: Basic Relations

- **Antecedent:** Motivating Operation
- **Behavior:** Verbal (response form shaped by a community of speakers)
- **Consequence:** Specific Reinforcement “given consequence in a verbal community”
- The mand specifies its reinforcer
- Pure mands are rare
 - A behavior analysis is less like an arrow and more like a swarm of bees.....(Dave Palmer)

A question: How was the mand emitted in the following video acquired? (how was it taught?)

Some options...

- Directly taught: when you want creamer, ask for the creamer!
- Repeated trials and practice
- Interrupted chain with only creamers absent (and then teaching one by one, all other things he might need to ask for)
- Transfer from tact to mand under conditions of motivation without specific training

When a mand is acquired:

- You can't tell under which conditions it was taught
- But how it is taught is critically important!

Pure Mands are Rare

- **Motivation** arises through **complex interactions** with the **environment**
 - Passage of time and **Deprivation** and **Satiation**
 - **Changes in stimulus conditions** made relevant by a specific history of learning
 - These are not binary variables but rather continuous and interactive
- Mands occur in situations where the evocative condition includes a **previously acquired tact** or **intraverbal** relation
 - The sight of something in the presence of latent motivation evokes a mand
 - A verbal response of someone else brings to strength latent motivation and evokes a mand
 - A combination of environmental stimuli coalesce to evoke a mand

Mands are also modified

- The **form** in which a mand is emitted **alters its effect on a listener**
- The speaker will alter the way a mand is presented to “soften” or ‘strengthen” the mand
- Differences in response form alter the probability or quality of reinforcement delivery
- More on this in a little while...but first..
- **Where do mands come from???**

A Baby Acquires a Mand...

- An adult, perhaps a mother, **repeatedly presents some reinforcing event**..a bite to eat, a tickle, a brightly colored toy...
- The dear little baby emits an **observational response**...looking at the event and perhaps shifting gaze to the adults expectant facial expression (the observational response has been previously reinforced by seeing other “good things”)
- While presenting the event, the **adult presents a characteristic vocal** response producing an acoustical pattern that is paired with the presentation of the event (the parent says the name of the item)
- The **baby hears the sound** of the word **while reaching and obtaining the item**...
- The **sound of the word thus takes on both discriminative and reinforcing properties**
- Since the baby has likely been emitting varied vocal responses, the emission of vocal responses similar to what has been heard under conditions of reinforcement takes on reinforcing properties (**parity**) and **becomes more frequent in the baby’s repertoire**
- In the future, when the mother presents a similar event, the emission of a **response similar to what was heard when the event had been previously emitted now may be more likely**
- **When the vocal response is “close enough” to be discriminated by the adult, the reinforcer may be delivered contingently upon such vocalization**
- **And one mand response class is born!**

All that goes on....

- A social mediated event is established as having value
- “Joint attention”
- Gaze shifting
- Reinforcer has value
- Access to reinforcer mediated by a listener
- Response form that will control listener is correlated with delivery of reinforcer
- Speaker acquires topography of response form
- Speaker discriminates when the listener is available to deliver reinforcer
- The listener may need to prompt the speaker to emit the response form
- Prompts need to be faded
- The value of asking must be maintained
- If other mand forms are established, the conditions for emitting the effective response must be discriminated

An older child acquires a mand

- Once the child has acquired one mand, **the ability to echo parental vocalizations under conditions of motivation is established as a general response class.**
- The child may also have **acquired the ability to tact a range of events** (through playful tact interactions in which “naming” parts of the environment as a result of previously hearing the “name” of the item or event resulted in non-specific reinforcement)
- When motivation for a specific event previously acquired as a tact occurs, the child may emit the name of the item in order to functionally control presentation of the event or item by a listener who has a history of reinforcing mands: **tact to mand transfers**
- Eventually the skill **transfers to novel tacts** and across a range of listeners including novel listeners who have previously not reinforced the specific mand.

Almost all mands are multiply controlled

- However, in all cases, the primary criteria that differentiates a mand from all other basic types of verbal behavior is that the main controlling variable is a ***motivating operation***
- We don't often ask for things that are not present or at least under the control of some other present evocative condition

BUT: we have to start somewhere...so I will briefly review procedures to teach basic mands involving an item being present.

Mand Training

- Teaching students to make requests is a central focus of interventions guided by ABA
- Mand training address the core deficits of Autism:
 - Social communicative skills
 - Repetitive and stereotypical behaviors

Mand Training Basics

- Establish MO
- Pair delivery with a listener
- Shape mand response form
- In conditions of effective MO, prompt the mand
- Fade prompts (within trial or second trial)
- Teach mand discrimination
- Correct any errors that may occur including reducing any scrolled responses
- Shape mand repertoire across a continuum of mand skills

Such contrived “at the table” mand sessions are only a tool.

Remember

- All advanced mand skills will likely be acquired more efficiently if **practice is distributed** and efforts are made to get the mand to occur under natural conditions.
- Vary SR+; Vary delivery; Small amounts; Deliver immediately; Stop before SR+ loses its value

Mand Training requires more than “mand sessions”

- Training **across settings**
- Distributed opportunities across **time** and **locations**
- **Indiscriminable contingencies** (produce an unexpected jump in MO!)
- Teaching **when the mand will actually be needed!**
 - Activities of Daily Living
 - Leisure activities
 - Peer interactions
 - Situations requiring problem solving
- Integrated into a range of **relevant conditions involving complex verbal behavior** (academic responding; conversational interactions)

A Note on Scheduling

- For advanced mand training, scheduled mand sessions may not always be appropriate.
- Schedule trials that are **embedded** in other activities
- Make data sheets or other cues that remind staff to run the protocols
- To get more distributed practice:
 - Use daily clicker counters to get daily frequency (rather than mands per minute within session)
 - Set up systems to reinforce staff for running mand trials that are embedded in other activities

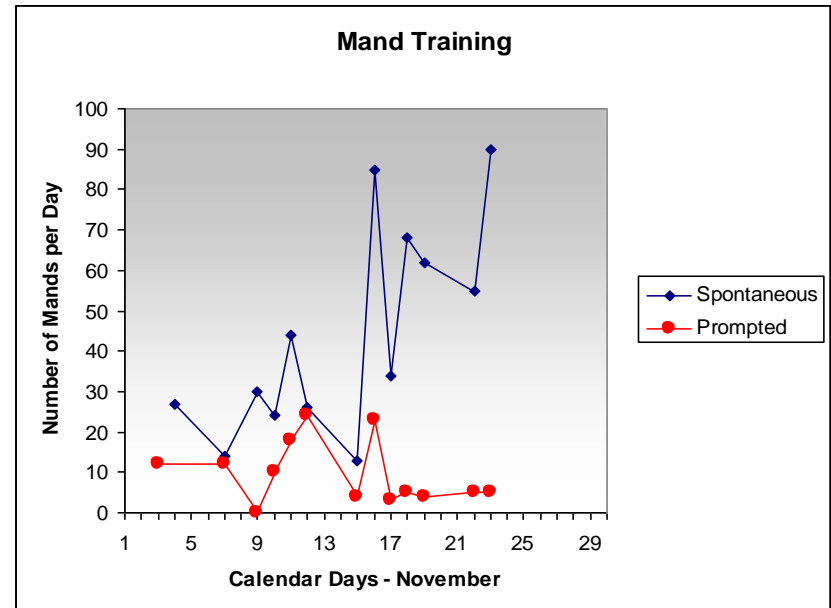
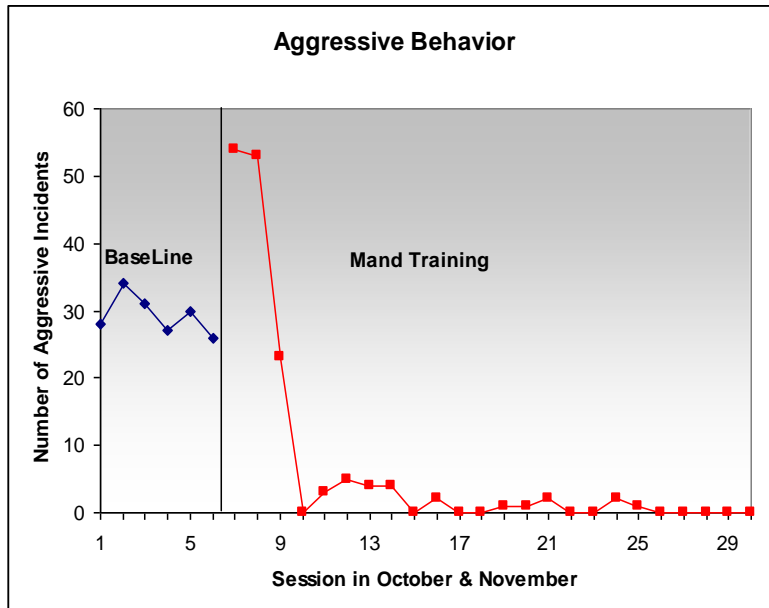
Several Types of Mand Behavior: Some Examples

- Mand for item present vocal response
- Mand for item present sign language response
- Mand for item present with selection based response (i.e. Picture Exchange Communication System; Frost & Bondy, 1994)
- Mands for negation
- Mand for item not present
- Mand for attention
- Mand for action
- Mands as part of problem solving (e.g. work situation)
- Mand for information
- Mand for continued verbal behavior (conversation)

Additionally, teach mands as a part of protocols for reducing problem behavior maintained by socially mediated positive reinforcement

- Motivating Operation manipulation
 - Making manding **easier than problem behavior** to obtain appropriate reinforcement
- **Wait** protocol
- **Accepts no** protocol
- Mands for **negation** (note: do not remove reinforcer contingent on problem behavior)
- Mands to **escape or avoid** an activity (break cards; note issue of CMO-R reduction)

Mand Training alone may have a reductive effect on problem behavior



Motivative Operations and the Mand: *Jack Michael*

Motivative Operations	
Value Altering Effects	Frequency Altering Effects
Establishes value of stimuli: events or items will serve as reinforcers	Evokes any behaviors that in the past have resulted in obtaining the events or items
Abolishes value of stimuli: events or items will not serve as reinforcers	Abates any behavior that in the past have resulted in obtaining the events or items

Motivating Operations

- **Multiple MOs can be effect at any one time**
 - I could want to read, take a walk and eat all at the same time!
- The **response correlated with the strongest motivating operation in effect is likely to be emitted**
 - If food deprivation is very strong, I will likely choose to eat
 - If I am not “very hungry” and have been sitting for a while, I may take a walk
- However, **response effort can also be a variable related to which MO takes precedence**
 - If obtaining food is a challenge for some reason (refridge is empty and I would have to go to the store) and it is raining, I end up reading even if other MOs are stronger!

Another effect of Motivating Operations in the mand frame

- **The strength of an MO may alter the mand response form**
- Stronger MOs may lead to mands being said faster and louder (more emphatically)
- Stronger MOs may lead to shorter, more efficient mands
- Stronger MOs may reduce the effect of other variables on the mand, such as the listener's history of responding
- Weaker MOs may be correlated with less strongly emitted mand responses
- Weaker MOs may lead to other variables more strongly altering the mand response form

The autoclitic

- Verbal behavior about verbal behavior
- Alters the effect of the primary operant on the listener
- Can not stand alone
- Autoclitic control can take a variety of forms
 - “gestural”
 - strength of emission
 - “grammatical” forms

The Autoclitic and the Mand

Motivation can:

- determine if a mand is emitted
- and also alter how it is emitted
 - The way in which the mand is emitted may be altered due to specific listener variables

Primary operants must be acquired before autoclitics

- One can not alter a primary operant with an autoclitic unless the primary operant is part of the speaker's repertoire
- Teach a broad number of single word mands before venturing into training complex modified mands
 - Rote: "I want_____, please" (does not include autoclitic function)

What the autoclitic “says” about the speaker’s mand:

- Candy!
- Candy?
- Candy, please
- That candy sure looks good
- I sure do wish I had some candy
- I want candy
- Give me the candy, now!
- You better give me the candy.
- I would like some candy, please.

How autoclitic control is acquired

- **No certainty on this issue.** Research is still slim.
- **Parity** (Dave Palmer) is likely part of the process
- **Respondent variables**
- Autoclitic Frames serve to **specify aspects of reinforcer delivery**
 - “Throw it fast”
 - “Throw it slow
 - “Throw it low”
 - “Throw it high”
- **Training the function of other autoclitic frames may be extremely difficult**
 - “Do you think I can have a piece of that pie, please?”
 - “Wanna go with me”
 - “Hey dude, how about the ball!”
 - “knock it off!”

General Guidance

- Do not **directly** teach autoclitics in the mand frame
- Build large repertoire of mands first
- Be sure to **establish parity!**
 - Model appropriate autoclitic-modified mands
 - Perhaps, teach mand forms as echoics (not under conditions of specific MO)
- Teach pivot mands as first step to building complex mands
 - Rather than teaching “carrier phrases” it is recommended that we teach the student to be more specific to the listener by teaching multiple component mands
- Do not teach yes/no mands too early (they are really autoclitics!)

The role of the autoclitic in yes/no mands

- Tacting the status of motivation
 - Teach the tact of motivation: indirectly
 - Along the lines of “embedded targets”
- Teach the yes/no relation under conditions of known motivation
 - Do you want a....
- Avoid having yes/no serve as a primary mand

Protocol for Yes/No “Mands”

- Do not teach until many individual mands are acquired under appropriate MO control
- Do not run yes/no too frequently
- Requires initially establishing control of events that are known to usually be reinforcing and events that are clearly NOT reinforcing
- Present Sd for responding to a query as to whether an item is wanted or not (e.g. “do you want an apple?” “Do you want to listen to the speech on policy again?”) Prompt the appropriate yes/no response assuming you are clear on the relation to current MO
- Fade prompts on future trials
- Vary items/reinforcers used
- Randomize teaching trials/keep primary mands strong

Multiple Component Mands

- Each component specifies the definable characteristic and discriminates it from alternative characteristics of the non-reinforcing items
 - E.g. big (not little), red (not blue or yellow), ball (not car)
- These unambiguous responses to the parts and features permit more immediate reinforcement for the speaker

Multiple-Component Mand

Antecedent	Behavior	Consequence
<p>MO for a specific item</p> <p>The general response form (e.g. "ball") will not immediately guide listener's behavior to specific item</p> <p>The reinforcer has definable characteristics that will effectively modify the mediator's behavior</p>	Multiple-component mand	Specific item mediated by listener

Multiple-Component Mands

Antecedent	Behavior	Consequence
<p>MO for a specific ball: big and red must be specifically valuable</p> <p>The mand “ball” does not discriminate which ball is the reinforcer</p> <p>The definable characteristics (<i>big</i> and <i>red</i>) will effectively guide the listener to the specific ball</p>	<p>“big, red ball”</p>	<p>Specific item mediated by listener</p>

Pre-Requisite Skills

- A generalized manding repertoire with respect to classes of reinforcing stimuli (e.g. mands “ball” for big balls, little balls, squishy balls, etc.)
- Strong repertoire of tacting parts and features of various items (adjectives, adverbs)
- Some parts and features can be taught in the mand frame prior to acquiring the tacts

Motivating Operations for Multiple-Component Reinforcement

- Prior to teaching multiple component mands, the teacher must contrive motivation for both the general reinforcer (e.g. “ball”) and the targeted characteristics (e.g. “red” or “big”)
- What are some ways that one might strengthen the value of the red ball over the green ball?
 - E.g., give the red ball more air that allows it a stronger bounce
- Item present vs. Item not-present (Google search)

Teaching Procedures

- Contrive specific MO
- Utilize the least intrusive prompt procedure (2nd trial transfer , within-trial transfer, or faded prompt procedure)
- When prompting utilize operants that are already in the student's repertoire
- Transfer trials to fade to appropriate MO control

Remember the integration of all verbal operants in relation to multiply controlled mands

- Naming relations (Horne and Lowe) and the mand
 - Tact to mand transfers
- The echoic and autoclitic relations
- Mands for information
- Intraverbal webs as one entry point

The Tact and the Mand: Naming Theory!

- Teachers often state: “This student can mand for anything if he knows its name! What do I do next?”
- Often mand training is stopped, prematurely at this point.
- Being able to mand for things and manding at the right times and with the right control is much more complicated.
- The following protocols and discussion is provided to assist in addressing this issue

Some other multiply controlled mands to consider

- Mands for missing items
- Mands for activities
- Mands for attention
- The interrupted chain and problem solving
- Mands for information
 - Regarding events related to various direct reinforcers or routines of daily life
 - Regarding information related to other verbal information
 - Eg. Mands related to reading comprehension
- Mands in conversation

An advanced protocol: attention to the listener (eye contact protocol)

- While this should be established early, it is often a skill that is taught only after the child has acquired a range of other mands
- It's value is in teaching the student to monitor their listener.
- Eye contact as an observational response prior to emitting a mand

Eye contact and the mand

- The face as an SD (Per Holth)
- Use of time delay in the mand frame (Vincent Carbone)

Eye Contact protocol: not in the mand frame

- Establish a set of stimuli that are currently valuable to the student.
 - This can involve manipulation of MO such as the teacher controls items needed for a preferred activity (e.g. teacher holds the marbles for the Hungry Hungry Hippos game.)
 - Can also be bits of food or even “postures” that indicate that some physical reinforcement will occur (e.g. holding out hands like one would before delivering ‘head squeeze’)
- Initially deliver one or two reinforcers to establish the teacher as the source of the reinforcer.
- After the student readily reaches toward the teacher to accept the items, present another and say something like “you can have it!” BUT do not immediately deliver. Hold the item as if it is available but do not give it to the student.
 - This failure to deliver after taking previous items from the teacher acts as a bit of extinction and will lead to variations in the students responses other than just reaches: the hope is that one of those variations will include looking to the teachers face and eyes.
- If the extinction leads to the student, looking at the teachers face and eyes, deliver the item while saying something like “here is your _____” or simply naming the item.
- Do not at any point use the verbal Sd “look at me”; also do not prompt eye contact by physical moving the child’s face to look at yours; finally do not hold the reinforcer near your eyes.
- Track data on the attached data sheet. Graph the percent of trials with each level of eye contact. Place checkmark in box indicating latency to eye contact. This data does not need to be taken every time the program is run. You can take a daily sample for some designated period of time (perhaps 5 to 10 minutes).

Eye Contact protocol in Mand Frame

- Establish mands for items
- Once range of mands established begin training eye contact
- Present MO and SD, when mand occurs, so not immediately reinforce: interject a time delay
- The time delay will likely have an extension effect: student will alter response, including hopefully looking toward the source of reinforcement and eventually the eyes of the listener
- When the student “looks to see if the listener will reinforce”; deliver reinforcement
- Differentially reinforce mands with eye contact and no time delay
- Avoid saying “good looking”

See Carbone, et al, 2013

CMO vs. S^D

- Why is the distinction important for student programming?
 - Throughout our lives we (and our students with autism) experience many situations in which stimuli may be valuable but momentarily unavailable
 - Engaging in certain types of behaviors can change our environments to produce these stimuli and thus improve our environments

Mands for Missing Items vs. “Spontaneous” Mands

- “Spontaneous” manding refers to mands in which the most potent controlling variables are the MO and the listener’s presence
- Mands for missing items depend on other stimuli that frequently accompany the reinforcing stimulus*
- An MO for a single item corresponds to a single response
- Avoid teaching single mands within carrier phrases (e.g. “I want X”)

Manding for Missing Items

This protocol is essentially the same as the interrupted chain protocol, however, mands for missing items often involve only a two step chain. Example: pudding with no spoon

Antecedent	Behavior	Consequence
Overarching MO for terminal reinforcer Completed step in a chain of behaviors that lead to terminal reinforcer Next step is blocked due to missing item needed Audience/listener as an S^D for mand	Mands for missing item	Missing item is mediated by listener and subsequent steps in chain completed

Pre-Requisite Skills for Missing Items

- Mands for 75 to 100 items present and actions
- Mands are generalized across instructors, stimuli, and settings
- A repertoire of tacting reinforcing and non-reinforcing items and actions

Motivating Operations for Missing Items

- CMO-T within a behavioral chain that is guided by an over-arching MO for some terminal reinforcer
- Making a PB and J sandwich
 - Over-arching MO for Eating the PB and J sandwich
 - CMO-T example:
 - Opened jar of peanut butter is a CMO-T that momentarily establishes a knife as a reinforcer

(What is the S^D ?)

Considerations prior to teaching mands for Missing Items

- Start with highly reinforcing activities (vs. task completion as a reinforcer)
- In response to an initial verbal S^D (e.g. “make a sandwich”), the student should have each step in the chain independently acquired when each stimulus is available
- Identify response form for targeted mand for missing item (e.g. sign vs. vocal)

Data Collection

The following is a sample chart (Adapted from Dr. Vince Carbone) that can be helpful in planning and collecting data for the mand sessions.

Chart 15

What is already reinforcing to the student?	What do I need to do to establish the value of something else as reinforcing?	What now becomes valuable as a reinforcer?	What response do I need to prompt?	Data Collection: Record P for prompted and U for unprompted
Eating ice cream	Give student the ice cream with no spoon	A spoon	Show spoon and say "spoon"	
Blowing bubbles	Give student the bubbles without the wand	The wand	Show wand and say "wand"	
Completing work to get praise from teacher	Ask student to write the numbers 1-10 and give paper but no pencil	A pencil	Show pencil and say "pencil"	

Data Collection

- Cold probe of target mands for missing items
- Tally prompted vs unprompted throughout day
- Tally untrained novel mands for missing items

Steps in Interrupted Chain/Problem Solving

- Before beginning establish generalized mand repertoire including tact to mand naming skill
- Teach chained task to mastery: Independent task protocol: task analysis (either whole task or backward chain) prompt from behind, non-verbal prompt
- Separately teach tacts for all items, features, and actions associated with task
- Teach relevant intraverbal responses (tact to IV transfers)
- Practice altering/varying task set (materials) up so student can emit successful independent problem solving
 - Range of stimuli presentation (e.g. not in usual place, but visible)
 - Ties to some other acquired chain (e.g. filling an empty container)
- Alter task arrangement (either remove items or arrange so independent task performance is not possible)
- Let MO build for MO established through interrupted chain
- Prompt mand if necessary
- Do not run procedure every time task is completed
- Vary step and item that will be missing/altered
- Data: graph prompted and independent cumulative mands correct in interrupted chain.

Peer to Peer Manding

- Critical skill
- More difficult to establish early on: for students not skilled at manding, it will be easier to mand to a “predictable” listener such as a trained adult
- Requires teaching other students to effectively reinforce peers
- Protocol must address issues of value of giving something to someone else
- May be easier to teach using typically developing peers as listeners (reinforcer deliverers)

Steps in Peer to Peer Manding

- Begin process when student has acquired ability to readily emit mands to adult; new mands are acquired quickly
- Initially, if needed, teach student to accept preferred items delivered by peers
- Train listener to deliver reinforcer (may require subtle prompting)
- Subtly prompt target student to emit mand to peer
- Avoid adults reinforcing mands with praise or other reinforcers
- Adult may need to reinforce peer for delivering reinforcer (fade such reinforcement)
- Select items to be manded judiciously:
 - Items being manded for are not of value to peer who will deliver them or you have developed strong alternative reinforcement for delivering the items
- Initially teach in peer to peer sessions; fade-in distributed training

Mands for Information

- Teach individual wh forms in isolation
- Be sure the reinforcement for the mand is information (not direct contingency)
- The information should allow the student to respond more effectively to a problem situation (one in which an effective response is not immediately available)
- Eventually intersperse various types of mands for information in order to get discrimination between various wh functions (who for information about a person, where for information about a location, etc.)

Teaching Mands for Information

Teacher: _____

Date: _____

Observer: _____

Activity: _____

Area 1: Organization

- ____ Instructional area is neat and clean
- ____ All materials needed are organized and ready
- ____ Potential manding items are available

Area 2: Teaching Procedure

- ____ Teacher confirms there is an EO for item(s)
- ____ Teacher contrives an EO for information
- ____ Teacher uses a vocal prompt to evoke the mand for information
- ____ Teacher prompts several consecutive trials
- ____ Teacher fades prompts by progressive time delay
- ____ At least two mands for information are taught concurrently
- ____ Teacher delivers information as the reinforcer, not the item
- ____ Mands for information are taught with varying stimuli
- ____ Learner Responds at rate of at least 2 per minute

Area 3: Error Correction

- ____ Correct error correction procedures are used

Area 4: Data Collection

- ____ Frequency of mands for information are graphed daily
- ____ Frequency of mands for information are graphed daily
- ____ Stimuli used is recorded

Additional Comments: _____

Rating: 1 = Consistently 2 = Sometimes/inconsistently 3 = Not occurring N/A = Not applicable

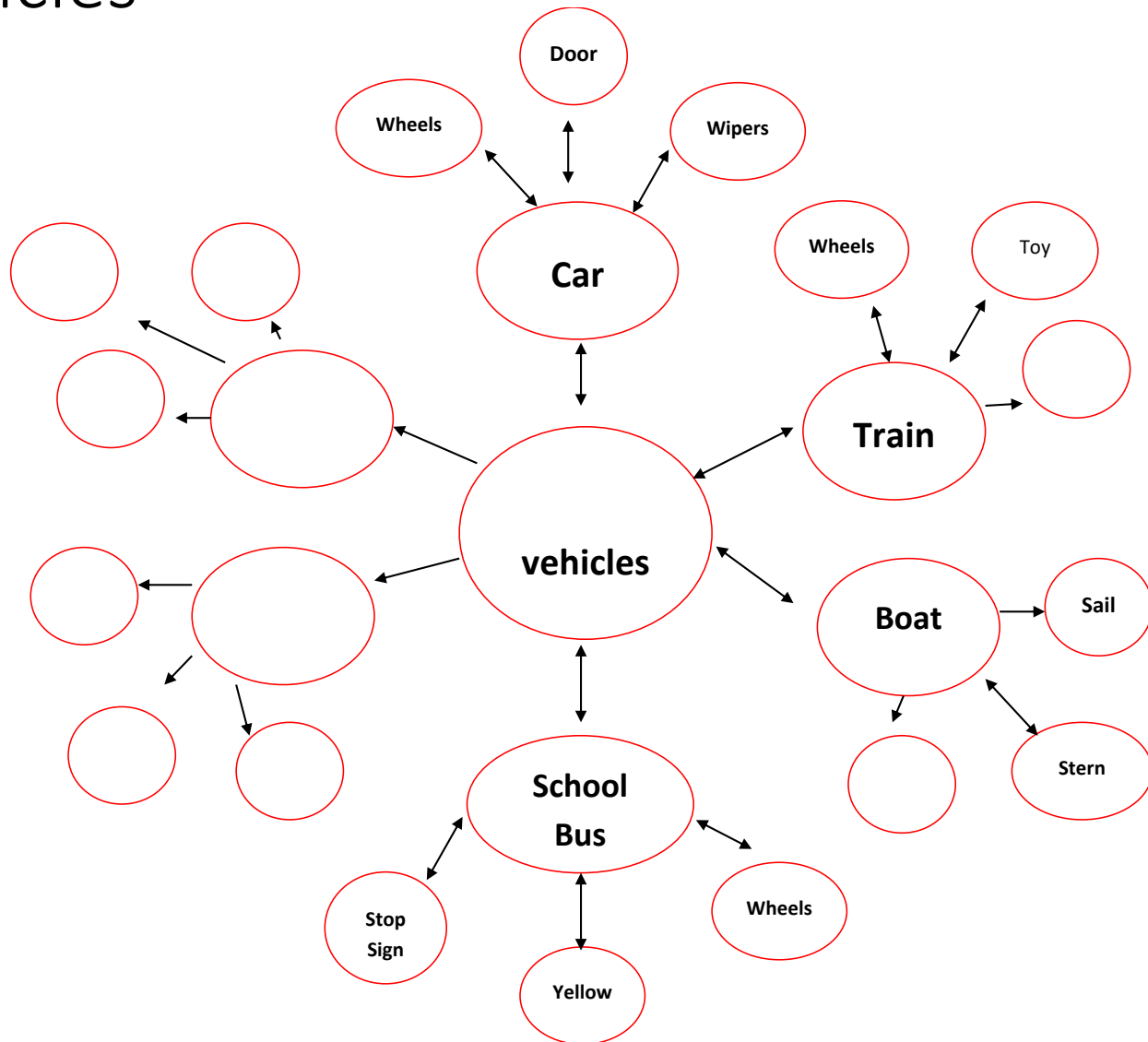
Number of Prompted and Unprompted Responses: 3 Minute Timing

Who	What	When	Where	Why	How	Which

Conversational Mands

- The challenge of contriving motivation for the individual to care about what another person is saying.
- One method to begin teaching this process, involves establishing an intraverbal web initially derived from intraverbal feature function class programming
- The IV webs are then expanded to include topics of interest to the student
- Note the IV web is not conversational: it is one way; teacher mands, student responses
- Through use of an interrupted chain procedure, MO is manipulated. A chain involving a topic of interest is interrupted by the teacher failing to make a mand; rather a comment is made about the student's last response.
- The comment and brief pause serves to establish MO for continued "conversation" (getting to the end of the web) as well as potentially serving as a CMO-T for information related to the teacher's comment
- If pause does not evoke mand, may need to prompt

Vehicles



Mand Skill Area	Initial Instruction	Intermediate Instruction	Advanced Instruction
Establishing Social Interaction as Source of Reinforcement: Critical throughout			
Mands with Item/S ^D Present and Prompts			
Mands with Item/S ^D Present			
Extend Number of Items/Actions			
Mands Across Instructors			
Mands Across Settings			
Peer to Peer Manding			
Mands for Missing Items			
Mands Solely under Control of MO			
Establishes Audience Contact			
Mands for Negation: Remove item or stop activity			
Mands for Assistance: specifics (actions) and help			
Mands for People			
Mands for others to Attend to Specific Stimuli (items, activities, etc)			
Mands for others to Comment/Respond to Actions, Features, Possessions of Speaker			
2 component manding (action + noun, adjective + noun, action + adverb, action + action, noun + noun)			
Multiple Component (more than 2 components)			
Mands in Response to an MO related Question with Yes, No			
Mands with Prepositions			
Mands with Pronouns			
Manding for Peer Participation in Play or Activities			
Mands for Information			
Mands for Future Events			
Increasing Mean Length of Utterances to Sharpen Audience Control (Autoclitics)			
Conversational Mands			
Mands for Sympathy and Emotional Support			

Barriers to Effective Manding

- Mand training is not part of the child's early language training history
- The target response form is too difficult for the child
- When a child has no or limited vocal behavior, sign language or other AAC have not been tried.
- The response requirement is too high and weakens the relevant MO
- There is no current MO in effect for the targeted item (e.g. satiation, weak to begin with)
- The response is prompt bound by physical, echoic, imitative, or verbal stimuli
- A nonverbal stimulus acquires control of the response and blocks MO control.
- A verbal stimulus acquires control of the response and blocks MO control.
- Motivation (MO) does not control the response form.
- The child has weak MOs in general
- Free or cheap access to reinforcers without manding
- Self-stimulation or obsessive behaviors compete with other MOs.
- A small group of mands has a strong history of reinforcement (e.g. candy, juice, skittles)

Barriers (cont.)

- There is a limited availability of established imitative or echoic responses.
- No variation in captured and contrived MOs.
- Negative behavior functions as mand
- Inappropriate mands become too strong and are intermittently reinforced.
- The curriculum is poorly sequenced.
- Fading out the object/non-verbal stimulus too soon.
- A single response topography functions as the mand (e.g. more, please, that)
- Can't establish different response topographies.
- Scrolling gets reinforced.
- Not enough mand trials are provided each day.
- Poor audience control.
- Mands only required and reinforced in a specific setting.
- Generalization training is not provided.
- Verbal information does not function as reinforcement for the child.
- Manding does not come under the control of natural contingencies.
- A history of punishment for attempts at manding.

Thank YoU!

Contact Information

www.pattan.net

Mike Miklos

mmiklos@pattan.net



Commonwealth of Pennsylvania

Tom Wolf, Governor

Pennsylvania Department of Education

Pedro A. Rivera, Secretary

Bureau of Special Education

Ann Hinkson-Herrmann, Director