

Critical Components for Establishing an Intensive Verbal Behavior Program for Students with ASD

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What is Verbal Behavior?

- The Analysis of Verbal Behavior
 - First Theorized in the 1950s by B.F. Skinner
- Words sound the same across situations but have different functions.
- Verbal behavior looks at language as having distinct operants with different discriminative stimuli and motivative and consequent conditions.

Current Practices for Improving the Language of Children with Autism

- Early and Intensive Behavioral Interventions
 - Discrete Trial Training
- Naturalistic Behavior Interventions
 - Pivotal Response Training
 - Milieu Teaching
 - Incidental Teaching
 - MAND TRAINING

Current Practices

- **Discrete Trial Training**
 - Didactic teaching strategies
 - Teaching is adult-led instead of child-centered
 - Shown to be more effective with children who possess some higher-level skills.
- **Naturalistic Behavioral Interventions**
 - Based on the principles of ABA
 - Following the child's lead
 - Using naturalistic settings and activities as the context for learning
 - Building on current communicative repertoire
 - Imitation and play skills

Current Practices

- Naturalistic Behavioral Interventions
 - Arose out of a clear need for interventions from which skills generalized
- Borrowed from developmental social-pragmatic interventions
 - Following the child's lead
 - Increasing initiations
 - Building on current communicative repertoire
- Effective primarily with children whose language is just emerging, and who infrequently initiate and/or have delayed early social skills

Why Verbal Behavior?

DTT and NBIs are often programmed with expressive and receptive language skills in mind

- Labels, requests, nouns, verbs, prepositions, 'wh' and yes-no questions
- When developing interventions based on traditional views of language, it may be easier to inadvertently teach skills out of order so that complex repertoires are taught before simple operants are established.
 - May result in rote responses and slow language growth

Einstein the Parrot

- <https://www.youtube.com/watch?v=mAp6X0zZfx0&list=PLnhanj7rZmnPW6lo6kXrLq16kIQSuIPUy>

Why Verbal Behavior?

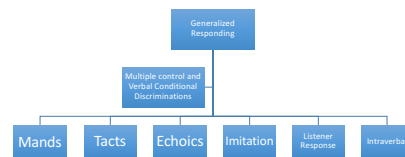
- Allows for simple verbal operants to form and build on each other with the goal of developing complex verbal behavior and generalized language on a strong foundation.
- Atomic Repertoire

Comprehensive Verbal Behavior Intervention Program

- A comprehensive verbal behavior intervention program is a language intervention that consists of teaching multiple verbal operants at one time, chosen based on each student's current verbal behavior ability.

Literature Review

- Importance of knowing how to teach simple verbal operants:



The ABCs

Consider all teaching interactions in relation to behavioral events:

- A = Antecedents**
- B = Behavior and**
- C = Consequences**

Behavior is defined in observable terms.

Behavior

- Observable
- Measureable (can count it or time it!)

Consider

Antecedents can involve people or can be non-social

- People: People in the morning
- Non-social: Tea in the morning

Behaviors can be verbal (social) or nonverbal (non-social)

Reinforcers can be delivered by people (social) or delivered without people (non-social)

- Someone has something (object, information) you want
- Automatic reinforcement

The important antecedents are those that occur immediately before the behavior

The important consequences are those that occur immediately after the behavior.

Reinforcement

Consequences that increase the future probability of a behavior occurring in the same circumstances are known as reinforcers. Improving conditions!

Reinforcement Requirements

Only if behavior occurs (contingency)

Only if immediately follows behavior (contiguity)

Positive and Negative Reinforcement

Positive: Adds something (*increases* future probability)

Negative: Subtracts something (*increases* future probability) ; is result of worsening conditions!

Punishment

Consequences that decrease the future probability of a behavior occurring in the same circumstances are known as punishers. Worsening conditions.

3 Key Aspects of Antecedent Condition

Motivation

Discriminative Stimuli (S^D)

Prompts

Motivation

Will be covered in detail later but..

Motivation is the result of conditions in the environment

Motivation

Motivation is often affected by:

1. Satiation and deprivation or
2. Other changes in conditions.

Discriminative Stimulus

Antecedents that signal the **availability** of reinforcement are called **discriminative stimuli (S^D)**.

- Ripe berries on a bush
- "Open" sign on store
- Teacher's instructions to a student

Discriminative stimuli can include pictures, verbal directions, and other materials related to instruction.

Discriminative Stimuli can be simple or complex...some S^D s include multiple events.

Examples: the question "what is it?" along with an object; ordering food at a restaurant (server, menu, type of restaurant, etc), a red light, and so forth.

Prompts are part of the antecedent condition.

We pick prompts because they are antecedents that have a strong history of getting the behavior to occur.

Once the behavior occurs, it can be reinforced.

ABCs: examples

Antecedent	Behavior	Consequence
Something interesting happens	Look in that direction	Seeing the event
Need to go out and seeing a door knob	Turning the knob	The door opens
Driving and the traffic light turns red	Depress brake pedal	Car stops
Spoon on table	Reaching toward it	Touching spoon

The Verbal Operants

- **Mand:** Request
 - Items, activities, missing items, information
- **Tact:** Label Sensory Stimuli
 - See, smell, taste, hear, touch
- **Echoic:** Echo something someone says
 - Full echoic
 - Partial echoic
- **Intraverbal:** Respond to something someone says
 - Fill in the blanks ("twinkle twinkle little"... "star")
 - Associations ("shoes and"... "socks")
 - Answering questions (Feature Function Class)
 - What does a cow say, name something a car has, where can you go swimming? What do you do with a phone?
 - Conversations ("What did you do this weekend?" "Saw a movie")

Other Relevant Operants

- **Imitation: Motor imitations**
 - With objects
 - Gross motor
 - Fine motor
- **Listener Response: Following directions**
 - Point to the cup
 - Find your arm
 - Sarah, can you go to my desk and grab a pencil?
 - **By Feature Function and Class**
 - Find the one you drink from
 - Which one is red?
 - Where's the animal that lives on a farm?
 - Find the one that is a type of furniture
- **Match to Sample**

Pair Teaching with Improving Conditions (Carbone, 2002)

- Pair instruction with positive reinforcement
- Fade in demands gradually
- Low response effort at first
- Immediate delivery of reinforcement
- Reduce learner errors
- Fast paced instruction (short time between trials)
- Intersperse easy/hard tasks
- Teach to fluency

Be careful not to be reinforced for ending problem behavior. Instructors can usually feel good by ending problem behavior by reinforcing it, but short term gain will make for long term pain (both for the student and the instructor).

Immediately ending problem behavior may mean you have reinforced it.

Verbal Operants

Verbal Operant	Antecedent	Behavior	Consequence
Mand	Motivative Operation (wants cookie)	Verbal behavior (says "cookie")	Direct reinforcement (gets cookie)
Tact	Sensory Stimuli (sees or smells cookie)	Verbal behavior (says "cookie")	Non-specific reinforcement (gets praised, for instance)
Intraverbal	Verbal stimulus (someone says: "What do you eat?")	Verbal behavior (says "cookie")	Non-specific reinforcement (gets praised, for instance)
Echoic	Verbal Stimulus (someone says "cookie")	Verbal behavior: repeats all or part of antecedent (says "cookie")	Non-specific reinforcement (gets praised, for instance)

Activity: Identify the Verbal Operants

As a result of:	One has a tendency to:	This is a:
Seeing banana	Say "banana"	
Wanting a banana	Say "banana"	
Hearing someone say "banana"	Say "banana"	
Hearing someone say "a yellow fruit"	Say "banana"	
Being told to get banana	Grab a banana	

Activity: Identify the Verbal Operants

As a result of:	One has a tendency to:	This is a:
Seeing a grape	Say "grape"	
Hearing a horn	Say "truck"	
Wanting a push on the swing	Say "push"	
Being told to "stand up"	Standing up	
Someone says "door"	Say "door"	
Someone says "door"	Say "keyhole"	
Smelling smoke	Say "barbeque"	
Seeing a cloud	Say "white"	

Activity: Identify the Verbal Operants

As a result of:	One has a tendency to:	This is a:
Wanting to buy a book	Ask "where's my wallet?"	
Seeing banana	Say "yellow"	
Hearing "banana"	Say "yellow"	
Hearing "cowboy"	Say "boy"	
Being presented with a task	Say "later"	
Seeing teacher	Say "go away"	
Seeing teacher while getting ready for an activity	Say "can I have a marker?"	
Seeing teacher	Say "teacher"	
Hearing "teacher"	Say "teacher"	

Other Relevant Operants

Operant	Antecedent	Behavior	Consequence
Receptive (Listener Responding)	Verbal stimulus (someone says "Touch cookie") <small>"In this case the cookie must also be present: all receptive discriminations involve 2-5's"</small>	Non-verbal behavior (child touches cookie)	Non-specific reinforcement (gets praised, for instance)
Imitation Point to point correspondence <small>a.k.a. Mimetic</small>	Non-verbal behavior (person performs an action, etc.)	Non-verbal behavior with point to point correspondence (person imitates same action)	Non-specific reinforcement (example: praise; "you're right!", "great job!" high five, pat on back, etc.)
Match to sample	Non-verbal behavior (presentation of stimuli)	Non-verbal behavior (in presence of one stimuli, a second stimuli is selected with shared properties).	Non-specific reinforcement (example: praise; "you're right!", "great job!" high five, pat on back, etc.)

Going Against Intuition-Reinforcement of Good Responding

- If a student is responding well, reinforce MORE and with MORE frequency
- Reinforce LESS for poor responding.

Mand Training

Mand Training

Teaching students to make requests is a central focus of Verbal Behavior Training

Mands benefit the speaker

Mand training relies on the use of the student's interest and motivation

Mand training is clearly a functional skill: it's practical!

Mand skills develop early in child development and should naturally be a part of early language training

A mand is controlled by motivation. One can not ask for something unless the thing is wanted.

When teaching a student to mand, teachers must always insure that the student wants the item or event that is the focus of training.

Motivation (or "wanting something") is the result of events in the environment.

Motivation for things like food and drinks are controlled by processes of satiation and deprivation.

When things are of value, people are more likely to do something to get them.

Motivation for other items (things that are learned over the course of a student's life) are controlled by specific changes in the environment.

Not all motivation is controlled by satiation and deprivation.

How things become valuable on a minute to minute basis:

- The presentation of one thing makes another event valuable
- The presentation of one thing makes the removal of that thing valuable

When something is presented that makes something else valuable, it is called a transitive motivative operation (TMO).
TMOs are learned through experience.

When the presentation of an event makes the removal of that event valuable, it is called a Reflexive Motivative Operation (RMO).
RMOs are learned and are often thought of as warning signals.

Examples of TMOS include:

- A screwdriver to remove a flathead screw
- Being asked to sign your name makes a pen valuable
- Having a dollhouse with no toy furniture makes the furniture valuable

Examples of RMOs include:

- Seeing a police car increases the value of slowing down
- The teacher's approach increases the value of getting a task out of the way
- Someone looking at you may make may also lead to escape as valuable

The reinforcer in each case is getting rid of the warning signal

In order to do mand training we must either capture or contrive motivation. Mand training is all about taking advantage of the environmental control of motivation.

Before running any mand trial, always check for motivation.

If a student says something, not to obtain the item but for generalized reinforcement (non-specific) such as to escape a task or get some other reinforcer, the response is likely a tact, not a mand.

Before beginning mand training, establish a list of items that can be used for teaching.

Best items:

- Can be delivered quickly
- Are consumable or allow only a brief period of contact
- Can be teacher controlled
- Are usually strongly motivating
- The sign or word used to mand for the item is not too hard to produce

Before beginning mand training, be sure the teacher is paired with delivery of reinforcers.

Think: Students who are still learning to approach

To establish approach behavior, freely deliver reinforcers with little response effort.

Little response effort in this case means: takes the item or activity from adult without problem behavior.

Avoid in almost all cases delivering reinforcers when problem behavior occurs.

Pair delivery of reinforcement with a model of the response form that the student will later be expected to emit. Say what you are delivering!

Begin formal mand training when student readily approach adults and when they readily accept reinforcer. Be sure you have consistent motivation and enough items or activities.

You will need to teach more than one mand right from the start.

Generalized mands can be a problem:
avoid teaching *more, please, and help*.

Also avoid teaching one mand that many serve to request many different things ("candy" serving as a request for many foods and activities.)

The steps in teaching a specific mand involve:
-Verify motivation is in place
-Prompt the mand as the student shows motivation
-If response occurs, deliver item or represent trial without prompt (this will be dependent on student motivation and how hard the response is to produce). Will be discussed more momentarily

If the correct response occurs, deliver item or represent trial without prompt (this will depend on student motivation and how hard the response is to produce)

Before training a specific mand, you want to determine the student's response form: how will they ask for what they want.

Vocal/Verbal Response Form

Form	Function
• Vocal	• Verbal (Saying Water)
• Non-Vocal	• Verbal (Signing Water, handing over a picture of water, writing)
• Vocal	• Non-Verbal (non-social vocal noises such as coughing)
• Non-Vocal	• Non Verbal (crossing legs)

Types of response forms include vocalization, sign language, picture exchange, writing, and various augmentative devices.

When selecting response form, a good rule of thumb is always consider vocal first.

Use the VB-MAPP (language assessment) to help select response form.
If weak echoic, consider sign language.
If weak motor skills or attempts to teach sign fail, try picture exchange or augmentative devices.

Keep a list of reinforcers that can serve as mands to be trained. Work on only 3-5 target mands at a time.

Keeping Reinforcers strong: avoid satiation

- Vary reinforcers used
- Vary the way reinforcers are delivered
- Vary schedule of reinforcers (VR)
- Stop delivery before it loses value
- Avoid using too much at any delivery

In some cases, it may be necessary to condition other items and/or activities as reinforcers.

Mand training can go quickly or very slowly.

- The rate of mand acquisitions can vary depending on the student
- The rate of mand acquisition can vary across reinforcers used.

Mand transfer trials can be done in two ways:

1. Prompt mand and after student responds, pause, wait for student to respond again and then deliver reinforcer.
2. Prompt mand, deliver a little bit of reinforcer, then represent mand opportunity and use time delay. If mand is emitted, deliver more reinforcer.

If mand transfer occurs before reinforcement is delivered, it is called a within trial transfer.

If mand transfer occurs after reinforcement is delivered, it is called a second trial transfer.

Shaping Mand

- In some cases we need to use systematic shaping of mands by differentially reinforcing closer approximations of the adult form of the mand.

If prompts can't be eliminated on a transfer trial:
Repeated prompt procedure.

Mand Error Correction and Response to Scrolling

- Error responses do not contact reinforcement: remove the reinforcer
- Signal that reinforcement is not available
- If necessary prompt hands to neutral position
- Pause (for 3 to 10 seconds, depending on variables like motivation, strength of extinction effects) This phase is to insure error/scroll does not contact reinforcement.
- Represent item and immediately prompt
- Provide transfer trial (if appropriate)

Mand Error Correction

- Remove Reinforcer
- Neutral Hands if necessary
- Pause
- Represent with Immediate Prompt
- Transfer

Keep two kinds of data on mand training:
 mand acquisition
 mand frequency

Mand Probe and Rate Sheet

Learner: _____

ITEM	Target	Probe	Date	Week of				
				SI	T	W	TH	F
Apple	Apple	Apple						
Banana	Banana	Banana						
Carrot	Carrot	Carrot						
Orange	Orange	Orange						
Strawberry	Strawberry	Strawberry						
Watermelon	Watermelon	Watermelon						
Yogurt	Yogurt	Yogurt						
Apple	Apple	Apple						
Banana	Banana	Banana						
Carrot	Carrot	Carrot						
Orange	Orange	Orange						
Strawberry	Strawberry	Strawberry						
Watermelon	Watermelon	Watermelon						
Yogurt	Yogurt	Yogurt						

Date	Target	Response	Correct	Rate	Notes

Cold probe mand trials always involve a check for motivation.
 The probe involves two steps. First probe for motivation, then probe for response.
 MO/NO MO
 Yes/No

Remember mand training does not end with teaching to ask for things that are immediately present or offered. Some other mand skill programs:

- Mands under control of MO
- Mands for actions
- Mands for attention
- Peer to peer mands
- Yes/No mands
- Mands for information

- Mand Training Guidelines:**
- Have a variety of reinforcers available across categories (toys, edibles, actions) that include:
 1. **Items you are targeting** (prompt/fade throughout session)
 2. **Mastered items** (no prompting, error correction if necessary)
 3. **Future targets:** Items that are valuable but not yet mastered or targeted (no prompting, just deliver and say the name of the item)
 4. **Novel items:** Expose student to novel items and activities that may acquire reinforcing value and serve as future targets
 - Make sure you run enough easy trials (mastered mands or free delivery)

Learning to Name the Verbal Operants!

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Errorless Teaching

Errorless Teaching

Providing instruction so that your learner is less likely to make mistakes
 Involves the use of prompts – but these prompts must be faded!
 Increases rate of learner responding!!
 Allows us to engage in faster paced instruction
 Associated with *faster learning and reduced problem behavior!*

Errorless Teaching Sequence

PROMPT TRANSFER DISTRACT CHECK

Prompted Trial

Prompt occurs as an *antecedent*

Helps to ensure that a correct response will occur

Prompts come from *known items*

Distract Trials

Used to allow student to respond to other items after the prompt and transfer trials and before another trial of the same item with no prompt

Distracter trials come from known items- NOT targets!

The distracters help ensure that the student “remembers” the skill.

Check Trials

Is the learner able to respond after engaging in other responses (distracter trials)?

Is a quick way to “assess” if the student is learning!

Reinforcement & The Check Trial

If a correct response occurs on the Check Trial . . . REINFORCE!!!

A correct response on the Check Trial is the most independent response

Providing strong reinforcement after a correct Check Trial response will help to strengthen that correct response!

The Card Sort System

Which Operant?

“What am I doing?”

crying

Which Operant?

"This is my _____."

Arm

Let's Practice Teaching
a Tact

Which Operant?

"Tell me something
with wheels."

bicycle

Let's Practice Teaching
an Intraverbal


Which Operant?

"Do this"

Clap hands


Let's Practice Teaching
an Imitation

Which Operant?



“Show me laughing”

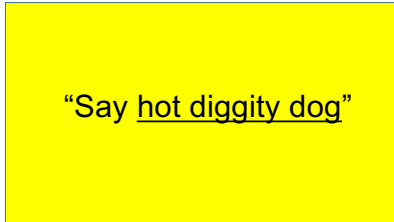
Which Operant?



“Show me your eyes”

Let’s Practice Teaching
an LR

Which Operant?



“Say hot diggity dog”

Why The Card Sort System?

As teachers, it is vital that we be organized and prepared for instruction!

The card sort system is used to guide our presentation of teaching items

It helps reduce teaching decisions during instruction – allows us to implement many of Dr. Carbone’s recommendations!

The Card Sort System

2 Types of cards

Picture Cards – such as the Language Builder cards
usually used for tacts, LRs for pictures, IV prompts

3x5 colored index cards – used for teaching targets that do not require a picture
usually used for imitation, LRs for directions, echoics, tacts without pictures (such as body parts, actions), intraverbal targets

Setting Up the Card Sort System

Create 4 piles of cards in front of the instructor.

- Pile one: known picture cards.
- Pile two: known 3X5 cards.
- Pile three: target picture cards.
- Pile four: target 3X5 cards.

Teaching Procedures for Target Items

ALL *targets* are taught using the Errorless Teaching Procedure
Present S^D immediately followed by your prompt, then continue with transfer, distract, check

NOTE: For Tact targets use “flashcard style” presentation
LR’s go “in the field”

Knowns & Targets

“Known Items” – mastered items or items the student knew on initial assessment - *sometimes called “easies”*

“Target Items” – items targeted for teaching – are assessed each day using the Cold Probe Data System (more later!)

The Instructional Ratio

80% of all trials in IT should usually be easy or known skills.

20% of all trials are usually target skills and/or correction of errors

For some learners this ratio may vary from 90/10 to 60/40

Let’s Practice Errorless Teaching Again!
(All 4 Piles)

Error Correction Procedure

Known Items – Procedure

2 Second Time Delay – this allows student to respond

Also creates a increased potential for incorrect responses

If an error occurs, the instructor must be ready to respond with a set error correction procedure

Types of Errors

Incorrect response

No response or too long of a delay

Self Correction

Error Correction Procedure Sequence

END PROMPT TRANSFER DISTRACTER CHECK

**Let's Practice
Error Correction Procedure!**

Problem Solving - Errors on Prompted Trials

1. Check instructional control: present several easy items if needed, then reinforce. Review VR, MO, etc.

2. Adjust prompt and teach skill necessary to prompt

3. "Slice back" to appropriate instructional level (given good instructional design this is least likely maintaining variable)

Errors on Transfer Trials

Run the error correction procedure

(There are many exceptions to this guideline)

Problem Solving – Repeated Errors on Transfer Trials

Two options

1. Transfer to lesser prompt (prompt fade)

2. Run repeated prompt procedure

Consider number of distracters used when running check trial again after repeated prompt-transfer trials

Problem Solving - Errors on Distract Trial

If errors occur on distract trial:

1. Run error correction procedure
2. Monitor the number of trials before reinforcing (will discuss further under topic of "VR").
3. May have to end run-through on transfer trial

Errors on Check Trial

Run Error Correction Procedure (but there are exceptions!)

Repeated Errors on Check Trials

Consider use of Prompt-Transfer sequence (without Check Trial)

Establish a criteria for reinstating the Check Trial

When using a Prompt-Transfer sequence, consider reinforcing after Transfer trial

Let's Practice Error Correction Procedure Again!
(4 Card Piles & Field)

A Word of Advice Regarding Your Implementation of Intensive Teaching...

Precision is better than Speed!

Putting It All Together

IT Session Reminders

- A run through is a sequence of trials
- Length of run through based on student's VR
- Importance of VR Schedule of reinforcement
- Better responding should lead to better reinforcement!
- Teach skills to fluency
- Importance of being organized!

BEWARE the danger of fluent responding!
Stick to your VR!!!

It is human nature to keep going when they are responding well. This only punishes rather than reinforces good responding!

DATA SYSTEM ORGANIZATION

Why Use First Trial Data/Cold Probe Data?

- ✓ Allows assessment that doesn't interfere with instructional delivery
- ✓ Provides conservative estimate of skill acquisition
- ✓ Provides measure of skill maintenance
- ✓ Provides possible estimate of skill fluency
- ✓ Efficient and Effective!

First Trial Probe Procedures

- Organize target material piles
 - May need to place known pics in field for LR targets
- Present target item S^Ds without any prompt
- Score each response immediately or sort and score after
 - May or may not continue with error correction procedures.
 - May or may not mix probes with easy items.
- Mastery – 3 *consecutive* correct responses

Cold Probe Data Sheet

Name		Weekly Probe Sheet										Week of	
Item	Response	1	2	3	4	5	6	7	8	9	10	11	12
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
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41													
42													
43													
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45													
46													
47													
48													
49													
50													

Color coding: Green = correct, Yellow = error, Red = no response. Asterisks indicate a change in phase change time on the corresponding date of the weekly sheet.

Monday – AFTER data collection
Update Cumulative Graph

Point on Imitation graph goes up one

Monday – AFTER data collection
Update Skill Tracking Sheet for Mastered Item(s)

Skill Tracking Sheet

Student Name: _____ Skill: **Imitation**

Target	Date Introduced	Date Mastered
1 Sign "apple"	9/28	10/1
2 Touch nose	9/27	
3 Arms out to side	10/1	
4 Tripod grasp		
5 Hands above head		
6 Cross arms over chest		
7 sign "book"		
8		
9		
10		
11		
12		
13		

Indicate date mastered and date when next target is introduced

Monday – Cold Probe AFTER data collection

Name: _____ Monday After Cold Probe Weekly Probe Sheet Week of: Oct 1-5

# days active	Operant	Target Skill	Probes	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	1	Im Arms out to sides	0	Y	Y	Y	Y	Y
7				Y	Y	Y	Y	Y
8				Y	Y	Y	Y	Y
9				Y	Y	Y	Y	Y
10				Y	Y	Y	Y	Y
11				Y	Y	Y	Y	Y

Imitation item mastered!

Add next target from Skill Tracking Sheet

Monday – What about your other graphs and skill tracking sheets??

Points on other graphs remain on the same line.
No dates are added to Skill Tracking Sheets.

A Critical Reminder Regarding Your Graphs. . .

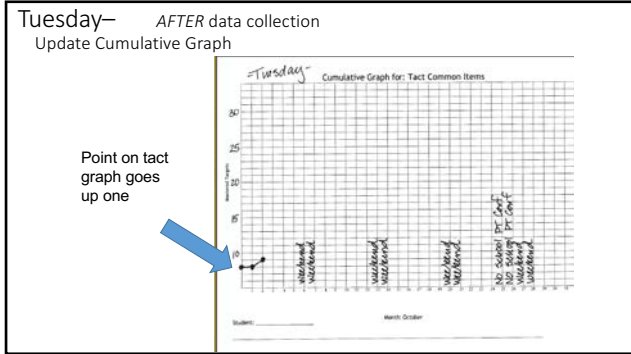
Update Every Graph Every Day!!!

Tuesday Cold Probe Data

Name: _____ Tuesday Weekly Probe Sheet Week of: Oct 1-5

# days active	Operant	Target Skill	Probes	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	1	Im Arms out to sides	0	Y	Y	Y	Y	Y

Tact item mastered!



Tuesday — AFTER data collection
Update Skill Tracking Sheet for Mastered Item(s)

Skill Tracking Sheet

Student Name: _____ Skill: Tact Common Items

Target	Date Introduced	Date Mastered
1 Cup	9/26	10/3
2 School bus	9/27	
3 Shirt	10/2	
4 Truck		
5 Bed		
6 Plate		
7 Police car		
8 Pencil		
9 Balloon		
10 pants		
11		
12		
13		

Indicate date mastered and date when next target is introduced

Tuesday Cold Probe Data

Name: _____ Tuesday Week of: Oct 1-5

Weekly Probe Sheet

#	days active	Operat	Target Skill	Probes Y	Mon	Tue	Wed	Thu	Fri
1	3	T	Cup	1	Y	Y	Y	Y	Y
2	2	T	School bus	2	Y	Y	Y	Y	Y
3	1	LR	Horse	1	Y	Y	Y	Y	Y
4	4	Im	Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im	Touch nose	0	Y	Y	Y	Y	Y
6		Im	Arms out to sides		X	X	X	X	X
7		T	shirt		Y	Y	Y	Y	Y
8					Y	Y	Y	Y	Y
9					Y	Y	Y	Y	Y
10					Y	Y	Y	Y	Y
11					Y	Y	Y	Y	Y
12					Y	Y	Y	Y	Y
13					Y	Y	Y	Y	Y
14					Y	Y	Y	Y	Y
15					Y	Y	Y	Y	Y
...					Y	Y	Y	Y	Y

Tact Item mastered!

Add next target from STS

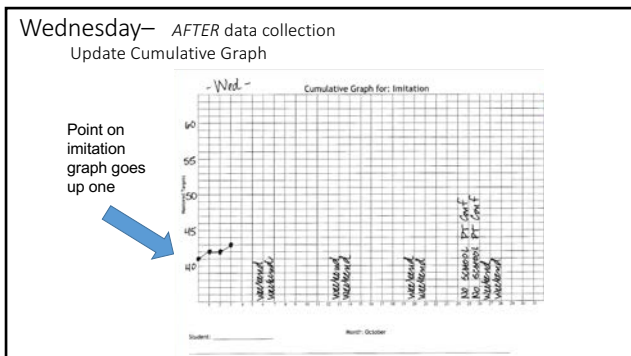
Wednesday Cold Probe Data

Name: _____ Wed Week of: Oct 1-5

Weekly Probe Sheet

#	days active	Operat	Target Skill	Probes Y	Mon	Tue	Wed	Thu	Fri
1	3	T	Cup	1	Y	Y	Y	Y	Y
2	2	T	School bus	2	Y	Y	Y	Y	Y
3	1	LR	Horse	1	Y	Y	Y	Y	Y
4	4	Im	Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im	Touch nose	0	Y	Y	Y	Y	Y
6		Im	Arms out to sides		X	X	X	X	X
7		T	shirt		Y	Y	Y	Y	Y

Imitation Item mastered!



Wednesday— AFTER data collection
Update Skill Tracking Sheet for Mastered Item(s)

Skill Tracking Sheet

Student Name: _____ Skill: Imitation

Target	Date Introduced	Date Mastered
1 Sign "apple"	9/26	10/3
2 Touch nose	9/27	10/3
3 Arms out to side	10/3	
4 Tripod grasp	10/3	
5 Hands above head		
6 Cross arms over chest		
7 sign "book"		
8		
9		
10		
11		
12		

Indicate date mastered and date when next target is introduced

Wednesday Cold Probe Data

Name: _____ *Wed* Week of: Oct 1-5

# days active	Operant	Target Skill	Previous Y	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	Im	Arms out to sides		X	X	X	X	X
7	T	shirt		X	X	X	X	X
8	Im	Tripod grasp		X	X	X	X	X
9				Y	Y	Y	Y	Y
10				Y	Y	Y	Y	Y
11				Y	Y	Y	Y	Y
12				Y	Y	Y	Y	Y
13				Y	Y	Y	Y	Y

Imitation Item mastered!

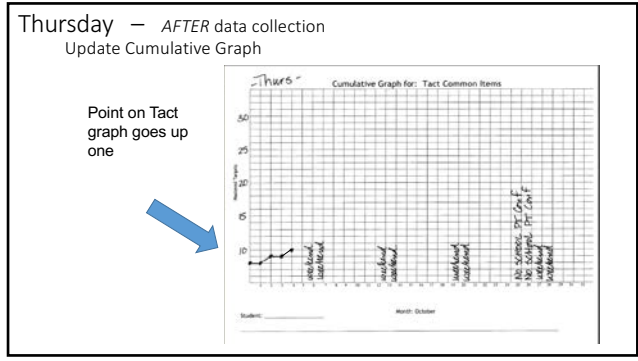
Add next target

Thursday Cold Probe Data

Name: _____ *-Thurs -* Week of: Oct 1-5

# days active	Operant	Target Skill	Previous Y	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	Im	Arms out to sides		X	X	X	X	X
7	T	shirt		X	X	X	X	X
8	Im	Tripod grasp		X	X	X	X	X

Tact Item mastered!



Thursday — AFTER data collection

Update Skill Tracking Sheet for Mastered Item(s)

Skill Tracking Sheet

Student Name: _____ Skill: Tact Common Items

Target	Date Introduced	Date Mastered
1 Cup	9/26	10/2
2 School bus	9/27	10/4
3 Shirt	10/2	
4 Truck	10/4	
5 Bed		
6 Plate		
7 Police car		
8 Pencil		
9 Balloon		
10 pants		
11		
12		
13		

Indicate date mastered and date when next target is introduced

Thursday Cold Probe Data

Name: _____ *-Thurs -* Week of: Oct 1-5

# days active	Operant	Target Skill	Previous Y	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	Im	Arms out to sides		X	X	X	X	X
7	T	shirt		X	X	X	X	X
8	Im	Tripod grasp		X	X	X	X	X
9	T	truck		X	X	X	X	X
10				Y	Y	Y	Y	Y
11				Y	Y	Y	Y	Y
12				Y	Y	Y	Y	Y
13				Y	Y	Y	Y	Y
14				Y	Y	Y	Y	Y
15				Y	Y	Y	Y	Y
16				Y	Y	Y	Y	Y
17				Y	Y	Y	Y	Y

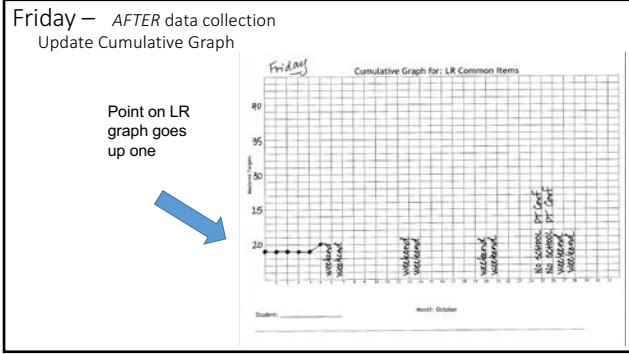
Tact Item mastered!

Friday Cold Probe Data

Name: _____ *-Friday -* Week of: Oct 1-5

# days active	Operant	Target Skill	Previous Y	Mon 1	Tue 2	Wed 3	Thur 4	Fri 5
1	3	T Cup	1	Y	Y	Y	Y	Y
2	2	T School bus	2	Y	Y	Y	Y	Y
3	1	LR Horse	1	Y	Y	Y	Y	Y
4	4	Im Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im Touch nose	0	Y	Y	Y	Y	Y
6	Im	Arms out to sides		X	X	X	X	X
7	T	shirt		X	X	X	X	X
8	Im	Tripod grasp		X	X	X	X	X
9	T	truck		X	X	X	X	X

LR Item mastered!



Friday — AFTER data collection
Update Skill Tracking Sheet for Mastered Item(s)

Skill Tracking Sheet

Student Name: _____ Sub: LR Common Items

Target	Date Mastered	Date Introduced
1 Horse	10/1	10/1
2 Table		
3 Cheese		
4 Hat		
5 Goat		
6 Scissors		
7 Giraffe		
8 Computer		
9		
10		
11		
12		
13		
14		

Indicate date mastered and date when next target is introduced

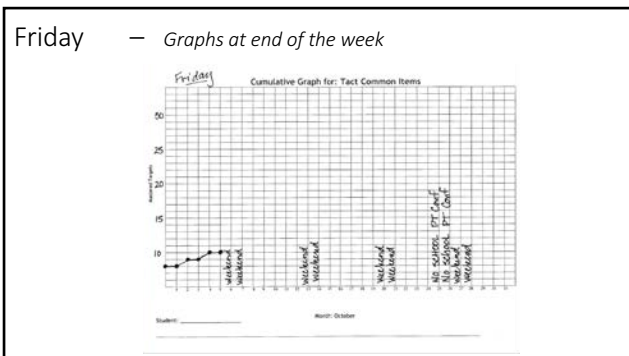
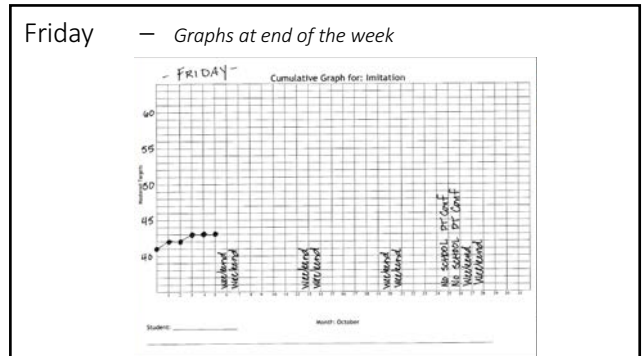
Friday Cold Probe Data

Name: _____ - Friday - Week of: Oct 1-5

Weekly Probe Sheet

#	Index	Operant	Target Skill	Probes	Mon	Tue	Wed	Thur	Fri
1	3	T	Cap	1	Y	Y	Y	Y	Y
2	2	T	School bus	2	Y	Y	Y	Y	Y
3	1	LR	Horse	1	Y	Y	Y	Y	Y
4	4	Im	Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im	Touch nose	0	Y	Y	Y	Y	Y
6	Im		Arms out to sides		Y	Y	Y	Y	Y
7	T		shirt		Y	Y	Y	Y	Y
8	Im		Tripod grasp		Y	Y	Y	Y	Y
9	T		truck		Y	Y	Y	Y	Y
10	LR		table		Y	Y	Y	Y	Y
11					Y	Y	Y	Y	Y
12					Y	Y	Y	Y	Y
13					Y	Y	Y	Y	Y
14					Y	Y	Y	Y	Y
15					Y	Y	Y	Y	Y
16					Y	Y	Y	Y	Y
17					Y	Y	Y	Y	Y

LR Item mastered!



Friday — Create Cold Probe Sheet for Next Week

Name: _____ - Friday - Week of: Oct 1-5

Weekly Probe Sheet

Name: _____ - Next Week - Week of: Oct 8-12

Weekly Probe Sheet

#	Index	Operant	Target Skill	Probes	Mon	Tue	Wed	Thur	Fri
1	3	T	Cap	1	Y	Y	Y	Y	Y
2	2	T	School bus	2	Y	Y	Y	Y	Y
3	1	LR	Horse	1	Y	Y	Y	Y	Y
4	4	Im	Sign "apple"	2	Y	Y	Y	Y	Y
5	2	Im	Touch nose	0	Y	Y	Y	Y	Y
6	Im		Arms out to sides		Y	Y	Y	Y	Y
7	T		shirt		Y	Y	Y	Y	Y
8	Im		Tripod grasp		Y	Y	Y	Y	Y
9	T		truck		Y	Y	Y	Y	Y
10	LR		table		Y	Y	Y	Y	Y
11					Y	Y	Y	Y	Y
12					Y	Y	Y	Y	Y
13					Y	Y	Y	Y	Y
14					Y	Y	Y	Y	Y
15					Y	Y	Y	Y	Y
16					Y	Y	Y	Y	Y

Targets not yet mastered are written on new CP sheet

Tracking Student Errors – PaTTAN Style

For each student, have 2 small zip lock bags :

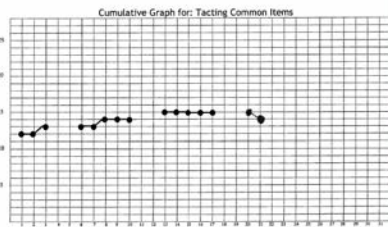
- **NO Day 1:** First error leads to error correction, review throughout the day, and place in bag at end of day. Probe item next day with target items.
- **NO Day 2:** Error on second day leads to error correction, review throughout the day, and place in bag at end of day. Probe item next day with target items.
- **Lost Skills:** Error on third day results in lost skill, note lost item on skill tracking and graph. Item goes into "Next Targets" bag.

☐ Keep in mind that for those who are new at this, as you learn this process, student errors may occur due to instructional errors.

Tracking Student Errors – Another Option

- **NO Day 1:** Mark a pencil "x" on the back of the card along with the initial of the operant (i.e., X-T X-LR). Place card in pile with targets and use Errorless Teaching procedure rest of the day
- **Day 2:** If correct response is given during Cold Probe, place card back in "knowns" toward the front. If incorrect response is given, mark an additional "x" on the back and place card in with targets and use Errorless Teaching procedure for rest of day.
- **Lost Skills:** Error on third day results in lost skill, note lost item on skill tracking and graph. Item goes into "Next Targets" bag.

Tracking Student Errors – Graph



Graph will drop one point. You can also write name of lost target on line if desired.

Tracking Student Errors – Skill Tracking Sheet

Skill Tracking Sheet			
Skill: TACTING PICTURES COMMON ITEMS			
Target	Date Introduced	Date Mastered	
1. cards	8/22/18	Mastered	
2. signs	8/22/18	Mastered	
3. sets	8/22/18	Mastered	
4. items	8/22/18	Mastered	
5. location	8/22/18	Mastered	
6. telephone	8/22/18	Mastered	
7. job	8/22/18	Mastered	
8. back roll up	8/22/18	Mastered	
9. wheel	8/22/18	Mastered	
10. animal	8/22/18	Mastered	
11. cake	8/22/18	Mastered	
12. hand over	8/22/18	8/27/18	9-21-18
13. cigarette	8/22/18	8/22/18	
14. hot air	8/22/18	8/22/18	
15. straight	8/22/18	8/22/18	
16. glass	8/22/18	8/22/18	

Indicate date of lost skill on your Skill Tracking Sheet

Teaching Reminders

Be sure you are mixing and varying operants

Pay attention to how many trials you run

Early Learners and breaking up the errorless procedure

Thoughts on reinforcement

PTDC Troubleshooting Resource on drive

Always go back to Dr. Carbone's slide!!



And Finally . . . Immense Gratitude to Mike & Amiris and PaTTAN for ALL they have taught us and shared with us!

