

Psyc 587

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Verbal Behavior: echoic and mand training

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Verbal Behavior

- ❖ Functional analysis of language: analyzed through ABC analysis to determine the function
- ❖ Reinforced through the mediation of another person's behavior (social interaction between speaker and listener)

Verbal Operants

- ❖ **Echoic:** repeating verbal behavior of another speaker (vocal imitation); controlled by a verbal SD with point to point correspondence and formal similarity
- ❖ **Mand:** asking for what you need or want (request); controlled by an MO; directly benefits the speaker

Verbal Operants ABCs

Verbal Operant	Antecedent	Behavior	Consequence
Echoic	Verbal Stimulus (someone says “airplane”)	Verbal behavior: repeats all or part of antecedent (says “airplane”)	Non-specific reinforcement (e.g., gets praised)
Mand	Motivative Operation (wants airplane toy)	Verbal behavior (says “airplane”)	Direct reinforcement (gets airplane)
Tact	Sensory Stimuli (e.g., sees or hears airplane)	Verbal behavior (says “airplane”)	Non-specific reinforcement (e.g., shares an experience with another person, gets praised)

Echoics

Why is this important?

Sound pairing

- ❖ **What if my client makes few or no sounds?**- pair making sounds with other highly preferred reinforcers
- ❖ **Goal:** increase frequency or variety of sounds made
- ❖ **Example:** pair “m” sound with playing music, pair “b” sound with blowing bubbles, pair “u” with being picked up within a social routine
- ❖ **Data:** frequency of target sound (or any sound) made within pairing period

Early vocal imitation

- ❖ **Goal:** develop an echoic repertoire of sounds, words, and phrases- whatever is modeled, the client will vocally imitate; improve clarity of language
- ❖ **Examples:**
 - ❖ “say m”- start with sounds the child already says
 - ❖ “say dog”
 - ❖ “say purple cat” etc

Vocal Imitation

- ❖ **Example program progression:**
 - ❖ Single sounds e.g., b
 - ❖ Combos/chains e.g., go, mama
 - ❖ Words e.g., ball, tiger
 - ❖ Phrases and sentences e.g., go (action), I see (object)

Vocal imitation video

Goal: J. will improve his echoic repertoire to include accurately imitating at least 10 age-appropriate sounds within play and daily living routines, with 80% accuracy, across people and settings.



Mand Training

Why is this important?

Early mand training

- ❖ **Example program progression:**
 - ❖ Impure mands (item is present)
 - ❖ Approximations
 - ❖ Single words
 - ❖ Pure mands (item not present)
 - ❖ Answering “what do you want?”
 - ❖ Mand frames

Mand training video examples

- ❖ <https://www.relias.com/resource/features-of-the-mand>

Early mand training: item is present

1. **Establish motivation:** instructor presents child with a blanket swing (contrives MO: lifts child up on the blanket, etc.)
2. **Pair (“first one is free”):** instructor delivers reinforcer with model (pairing trial)
3. **Prompt:** instructor pauses (time delay), prompts mand for up, lifts child up in the swing
4. **Fade prompts:** instructor again pauses (time delay), child mands ‘up’, lifts child up in the swing

Early mand training: tips

- ❖ May want to start with items that are consumable or allow for a short duration of contact (so you don't have to remove preferred items)
- ❖ Focus on teaching 3-5 mands for items that the child consistently wants
- ❖ Choose items that are easy to deliver
- ❖ Select words that are heard often in the client's daily life
- ❖ Consider simple words that are easy to say
- ❖ Avoid teaching general mands such as "more" to start
- ❖ Avoid asking "what do you want?" to start- appropriate prompt is echoic

Example data sheet

Approximated Mands Data Collection (with item visible)

Total Time Sampled: _____

Desired Item	Approximation Accepted	Echoic Prompt	Spontaneous
		Total Rate:	Total Rate:

Another example data sheet

Single Word Mands Data Collection (with item visible)

Total Time Sampled: 15 minutes

Desired Item	Prompted	Independent (object in sight)
Chip		
Swing		
Ball		

Incorporating technology

- ❖ Apps
 - ❖ Peek a boo barn
 - ❖ Road trip
 - ❖ PECS phase III: <https://www.youtube.com/watch?v=-xNHHAqzfUU>

Moving to pure mands: tips

Pure mands: item is not present

1. **Impure mand trials:** e.g., mand for bubbles with item present
2. **Partial transfer trials:** e.g., partially hide bubbles under table or behind back
3. **Transfer trials:** e.g., place bubbles in drawer

Example data sheet

Single Word Mands Data Collection

Total Time Sampled: 2 hours

Instructor/ Date	Mand Target	Echoic prompt / Visual	No echoic prompt / Visual	No echoic prompt / No Visual	Total Rate
	Car	16	8	2	
	Cookie	12	6	2	
		28/2= 14 per hour	14/2= 7 per hour	4/2= 2 per hour	46/2= 23 per hour

Mand frames

- ❖ Start teaching here once child has some regularly used pure mands
- ❖ Example:
 - ❖ (action) (object): blow bubbles, drive car, eat pizza

Example data sheet using AAC

Mand Frame	Model on AAC	Gesture to icon on AAC	Independent with item present	Independent without item present
<u>I want...</u>				
<u>Can I...</u>				
<u>Let's...</u>				
TOTALS				

Manding using attributes

- ❖ Hot vs cold e.g., during snack time
- ❖ Big vs small e.g., piece of cracker
- ❖ On vs off e.g., ipad
- ❖ Empty vs full e.g., water play tub
- ❖ Fast vs slow e.g., swinging, ball down ramp
- ❖ Other examples

Manding for cessation

- ❖ Extended duration at table
- ❖ Extended play with low preference toy
- ❖ Non-preferred song
- ❖ Non-preferred video
- ❖ Non-preferred stimulus e.g., blender

Manding for assistance

- ❖ Snack in tupperware
- ❖ Unopened water
- ❖ Toy Broken (Remove battery)
- ❖ Closed Door
- ❖ iPad with bubcap
- ❖ Other examples

Manding for missing items

- ❖ Lunch (e.g., pasta) without fork
- ❖ Juice (e.g., CapriSun) without straw
- ❖ Second shoe (go outside)
- ❖ Snack (e.g., ice cream) without spoon
- ❖ Paper without Marker
- ❖ Making a sandwich: toaster missing