Teaching Language to Children with Autism

by

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Portions of this material are from the upcoming book by M. L. Sundberg: A Behavioral Approach to Language Assessment and Intervention for Children with Autism (In preparation, due out by May, 2007)

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Behavior Analysis (Basic Principles of Operant Behavior)

Stimulus Control / Motivating Operation (MO/EO) → Response → Reinforcement, Punishment, Extinction, Conditioned reinforcement, Conditioned punishment, Intermittent reinforcement

Examples of Behavior Analysis

Antecedent-------->Behavior-------->Consequence

"Tantrum" (Functional analysis)

"Mommy" (Verbal behavior functional analysis)

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Language intervention is a major goal of most programs for children with autism

Traditional Unit of Analysis

Words, phrases, sentences, mean length of utterances (MLU): nouns, verbs, prepositions, adjectives, adverbs, etc.

What constitutes a behavioral analysis of language?

Language is learned behavior under the functional control of environmental variables (Skinner, 1957)

Behavioral Unit of Analysis

MO/SD —— Response —— Consequence

The verbal operant is the unit of analysis (e.g., mands, tacts, & intraverbals)

The behavioral classification of language

•Receptive	Following instructions or complying with the mands of others. Touch a picture of a shoe when asked "touch the shoe." (Listener skills)
•Echoic	Repeating what is heard. Saying "shoe" after someone else says "shoe."
•Imitation	Copying someone's motor movements (as they relate to sign Language. Tapping your fists together after someone else taps their fists together.
•Tact	Naming or identifying objects, actions, events, etc. Saying "shoe" because you see a shoe.
•Mand	Asking for reinforcers. Asking for a " shoe" because you want a shoe.
•Intraverbal	Answering questions or having conversations where your words are controlled by other words. Saying "shoe" someone else says "What do you wear on your feet?"
•Textual	Reading words. Saying "shoe" because you see the written word "shoe."
•Writing	Writing and spelling words spoken to you. Writing "shoe" because you hear "shoe" spoken.

The elementary verbal operants are separate repertoires and each must be taught

Speaker and listener skills are separate repertoires and each must be taught

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The Behavioral Classification of Language

Mark L. Sundberg

Listener	Following instructions or complying with the mands of others. Touching a picture of a shoe when asked, "Touch the shoe."
Echoic	Repeating what is heard. Saying "shoe" after someone else says, "shoe."
Imitation	Copying someone's motor movements (as they relate to sign language). Tapping your fists together after someone else taps their fists together (the sign for "shoe").
Tact	Naming or identifying objects, actions, events, etc. Saying "shoe" because you see a shoe.
Mand	Asking for reinforcers that you want. Asking for a shoe because you want a shoe.
LRFFS	Identify specific items when given some description (its function, feature, or class) of the item. Touching a shoe because someone says "Socks go with...."
Intraverbal	Answering questions or having conversations where your words are controlled by other words. Saying "shoe" someone else says "What do you wear on your feet?"
Textual	Reading written words. Saying "shoe" because you see the written word "shoe."
Writing	Writing and spelling words spoken to you. Writing "shoe" because you hear "shoe" spoken.

GLOSSARY OF BEHAVIORAL TERMINOLOGY

Prepared and Edited By
Howard L. Shaw, M.A., M.B.A., and Mark L. Sundberg, Ph.D.

Adapted from: Behavior Modification in Applied Settings, Alan E. Kazdin, The Dorsey Press, 1984.

Antecedent: A stimulus or event that precedes, or comes immediately before a particular response.

Baseline: The frequency that behavior is performed prior to initiating a behavior modification program. The rate of performance used to evaluate the effect of the program.

Behavior: Any observable or measurable response or act. (The terms behavior and response are used synonymously.)

Behavior Modification: Focuses on measurable, observable behavior, careful assessment of the behavior that is to be altered (using the Antecedent -> Behavior -> Consequence model), evaluation of the effect of the program in altering behavior, and concern for socially significant changes in behavior.

Changing Criteria: Requiring more and more behavior by raising the criterion for reinforcement as previous levels are mastered.

Consequence: An item or event that follows a response.

Contingency: The relationship between a behavior (the response to be changed) and the events (consequences), which follow behavior. A contingency is an "if-then" relation.

Contingency Contracts: A behavior modification program in which an agreement or contract is made between the persons who wish behavior to change (e.g., parents) and those whose behavior is to be changed (e.g., their children). The contract specifies the relationship between behavior and the consequences that follow.

Discrimination: Responding differently in the presence of different cues or antecedent events. Control of behavior by discriminative stimuli.

Discriminative Stimulus: (S^D) An antecedent event or stimulus, which signals that a certain response will be reinforced. A response is reinforced in the presence of an S^D.

Differential Reinforcement of Incompatible Behaviors, or DRI: Delivery of a reinforcer after a response that is incompatible or competes with a target response that is

to be suppressed. The effect is to increase the frequency of the incompatible response (e.g., cooperative play) and to decrease the frequency of the undesirable target response (e.g., fighting).

Differential Reinforcement of Other Behaviors, or DRO: Delivery of a reinforcer after any response except the target response. The individual is reinforced only when not performing the target response. The effect of a DRO schedule is to decrease the target (unreinforced) response.

Extinction: A procedure in which the reinforcer is no longer delivered for a previously reinforced response.

Extinction Burst: An increase in the frequency and intensity of responding at the beginning of extinction.

Fading: The gradual removal of discriminative stimuli (S^D), including prompts such as instructions or physical guidance. Initially, developing behavior is often facilitated by prompts. Yet, it is important in most situations to fade the prompt. Fading can also refer to the gradual removal of reinforcement, as in the progressive thinning of a reinforcement schedule.

Overcorrection: A punishment procedure, which consists of two components. First, the environmental consequences of the undesirable behavior must be corrected (e.g., cleaning up a mess). Second, correct forms of desirable behavior must be thoroughly rehearsed or practiced (e.g., cleaning up messes made by several other people).

Prompt: An antecedent event that helps initiate a response. A discriminative stimulus, that occasions a response. Instructions, gestures, physical guidance, and modeling cues serve as prompts.

Punishment: Presentation of an aversive event or removal of a positive event contingent upon a response, which decreases the probability of that response.

Reinforcement: An increase in the frequency of a response when the response is immediately followed by a particular consequence. The consequence can be either the presentation of a positive reinforcer or removal of a negative reinforcer.

Response: See behavior.

Schedule of Reinforcement: The rule denoting how many or which responses will be reinforced.

Shaping: Developing new behavior by reinforcing successive approximations toward the terminal response.

Stimulus Generalization: Transfer of a trained response to situations or stimulus conditions other than those in which training has taken place. The behavior generalizes to other situations.

Successive Approximations: Responses that increasingly resemble the terminal behavior, which is being shaped.

Target Behavior: The behavior to be altered or focused upon during a behavior modification program. The behavior assessed and to be changed.

Time Out from Reinforcement: A punishment procedure in which access to positive reinforcement is withdrawn for a certain period of time. The opportunity to receive reinforcement is removed contingent upon behavior. Isolation from a group exemplifies time out from reinforcement.

Token Economy: A reinforcement system where tokens are earned for a variety of behaviors and purchase a variety of back-up reinforcers. A token economy represents a system analogous to a national economy, where money serves as a medium of exchange and can be earned and spent in several ways.

Verbal Behavior Milestones Assessment, Placement, and Progress System (VB-MAPPS)
Level 1

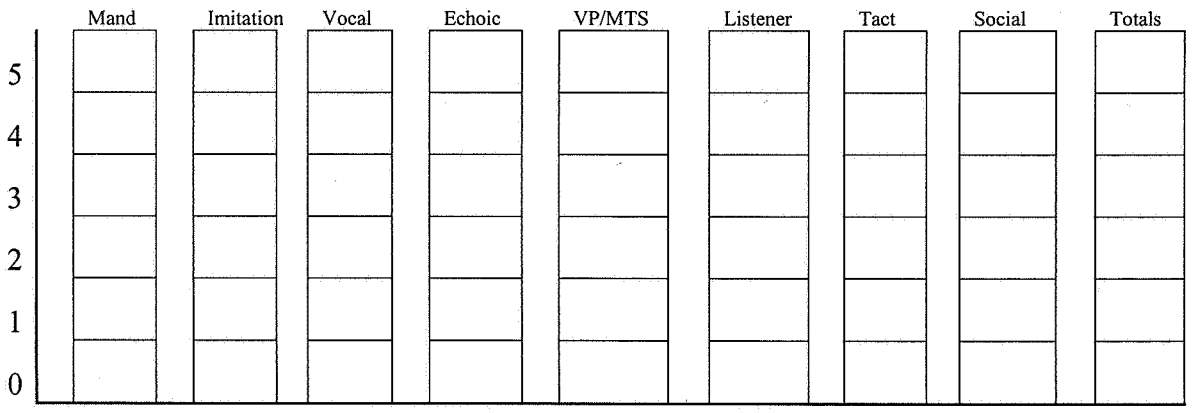
Scoring Sheet
(0-18 Months Developmentally)

Mark L. Sundberg
(Working Draft 9/18/06)

Name: _____

Date of Birth: _____

First Administration (Baseline)	Second Administration	Third Administration
Date: _____	Date: _____	Date: _____
Tester: _____	Tester: _____	Tester: _____
Total Score: _____	Total Score: _____	Total Score: _____
Color code: _____	Color code: _____	Color code: _____



Mand: Total score_____

Can the child use words or signs to ask for desired items and activities?

_____0. Does not emit words, signs, use pictures, or points to ask for reinforcers

_____1. Emits at least 2 words, signs, picture selection, points to reinforcers, says (or nods) *yes* or *no* with echoic, imitative, intraverbal, or other prompts, and the presence of the desired item

_____2. Emits at least 4 mands without echoic or imitative prompts, but the desired item can be present

_____3. Emits at least 8 different mands without echoic, imitative or intraverbal prompts, and 4 of the mands occur without the items present

_____4. Spontaneously emits an average of 10 or more mands per hour in the natural environment, with at least 5 different mands

_____5. Spontaneously emits at least 2 different mands to remove undesirable items or activities

Raw Scores/Comments:

Motor imitation: Total score_____

Can the child imitate the actions of other people?

_____0. Cannot imitate any of the motor movements of another person on command

_____1. Can imitate at least 2 motor movements on command

_____2. Can imitate at least 4 motor movements, and 2 actions involving objects on command

_____3. Can imitate at least 6 motor movements, and 4 actions involving objects on command

_____4. Can imitate at least 8 motor movements, and 6 actions involving objects on command

_____5. Can imitate 25 or more motor movements of any type on command

Raw Scores/Comments:

Spontaneous vocal behavior: Total Score_____

How often does the child spontaneously vocalize, and what's the nature of his vocalizations?

_____0. Does not emit any sounds, or only emits a few sounds each day

_____1. Spontaneously emits and average of at least 5 sounds each hour

_____2. Spontaneously emits at least 5 different sounds, averaging at least 10 total sounds each hour

_____3. Spontaneously emits at least 10 different sounds, averaging at least 20 total sounds each hour

_____4. Spontaneously emits a wide variety of different sounds, babbles frequently (beyond counting each sound), emits some word approximations

_____5. Spontaneously vocalizes whole words, phrases, and often appears to often be talking to himself or others ("jargon") although others usually can't understand what is said

Raw Scores/Comments:

Echoic: Total score_____

Can the child immediately repeat (echo) specific sounds or words on command?

_____0. Does not echo any sounds or words on command

_____1. Can immediately echo at least 2 specific sounds on command

_____2. Can immediately echo at least 5 specific sounds on command

_____3. Can immediately echo at least 10 specific sounds or words on command

_____4. Can immediately echo at least 20 specific sounds or words on command

_____5. Can immediately echo at least 20 specific words or clear approximations on command

Raw Score/Comments:

Listener responding: Total score_____

Does the child understand the words of others?
_____0. Does not attend to, or specifically respond to, any verbal stimuli presented by others
_____1. Attends to vocal stimuli, looks at people when they talk, smiles at the sound of words
_____2. Responds to "no," "hot" or other warning verbal stimuli, and responds to own name
_____3. Can look at or point to at least 5 family members, pets, or reinforcers when named
_____4. Can emit at least 4 motor actions on command
_____5. Can select, point, or look at total of least 25 people, objects, body parts, or pictures when named
Raw Scores/Comments:

Tact: Total score_____

Can the child tact any people, objects, or pictures?
_____0. Cannot tact any people, objects or pictures on command
_____1. Can tact at least 2 people, objects or pictures reliably on command
_____2. Can tact at least 5 people, objects or pictures reliably on command
_____3. Can tact at least 10 people, objects or pictures reliably on command
_____4. Can tact at least 15 people, objects or pictures reliably on command
_____5. Can tact at least 20 people, objects, body parts, or pictures reliably on command
Raw Scores/Comments:

Visual perceptual skills and matching-to-sample: Total score_____

Does the child attend to and respond to visual stimuli, and match objects and pictures?
_____0. Does not attend to familiar faces or objects, or visually track moving stimuli
_____1. Frequently attends to familiar faces or objects, and visually tracks moving stimuli
_____2. Frequently reaches for and grabs objects
_____3. Attends to a toy or book for at least one minute (non-stim item)
_____4. Completes matching inset puzzle with at least 4 pieces, and stacks at least 3 blocks
_____5. Can match at least 20 identical objects or pictures in an array of at least 3
Raw Scores/Comments:

Social behavior: Total score_____

Does the child attend to others and attempt to socially engage others?
_____0. Avoids eye contact, pulls away when hugged or cuddled, resists attention
_____1. Typically attends to familiar people when they enter a room or when they speak, and seems to enjoy some limited physical play
_____2. Smiles when familiar people come close, wants to be held, lifted up, or played with
_____3. Wants attention from others, follows others, and mands in some way for attention
_____4 Looks at other children, tracks them visually, and seems to want attention from other children, but may not actively seek such attention and interaction
_____5. Will spontaneously approach other children and engage in parallel play with other children
Raw Scores/Comments:

The total number of speaker and listener skills (excluding matching-to-sample): Total score_____

How many specific responses of any type can reliably be evoked on command?

_____0. Cannot reliably evoke any specific responses of any type on command

_____1. Can reliably evoke at least 5 specific responses of any type on command

_____2. Can reliably evoke at least 20 specific responses of any type on command

_____3. Can reliably evoke at least 50 specific responses of any type on command

_____4. Can reliably evoke at least 75 specific responses of any type on command

_____5. Can reliably evoke at least 100 specific responses of any type on command

Raw Scores/Comments:

Sundberg (2006). In Cooper et. al.

Table 16.5 Verbal behavior classification exercises

AS A RESULT OF...	ONE HAS A TENDENCY TO...	THIS IS A(N)...
1. seeing a dog	say "dog"	_____
2. hearing an airplane	say "airplane"	_____
3. wanting a drink	say "water"	_____
4. hearing "How are you?"	saying "I'm fine"	_____
5. smelling "cookies baking"	say "cookies"	_____
6. tasting soup	say "pass the salt"	_____
7. hearing "book"	write "book"	_____
8. hearing "book"	sign "book"	_____
9. hearing "book"	say "book"	_____
10. hearing "book"	say "read"	_____
11. hearing "book"	sign "read"	_____
12. hearing "book"	fingerspell "book"	_____
13. seeing a book	write "book"	_____
14. wanting a book	write "book"	_____
15. sign "book"	write "book"	_____
16. hear "color" see a car	say "red"	_____
17. seeing a dog on the table	say "get off"	_____
18. seeing stop written	hit the brakes	_____

19.	hear "Skinner"	write "behavior"	_____
20.	smell smoke	say "fire"	_____
21.	being hungry	go to a store	_____
22.	seeing "apple" written	sign "apple"	_____
23.	seeing "5"	say "five"	_____
24.	wanting things	say "thanks"	_____
25.	hearing "write your name"	write your name	_____
26.	hearing "run" spoken	fingerspell "run"	_____
27.	seeing "home" signed	sign "Battle Creek"	_____
28.	hearing a phone ring	say "phone"	_____
29.	smelling a skunk	say "skunk"	_____
30.	hearing "table"	say "mesa"	_____
31.	being happy	smile	_____
32.	hoping a pilot sees it	writing SOS	_____
33.	wanting blue	say "blue"	_____
34.	hearing "Red white and"	say "blue"	_____
35.	tasting candy	say "mmmm"	_____

Provide examples of verbal behavior.

36. Give an example of a mand involving an adjective.

37. Give an example of a tact of a smell.

38. Give an example of a response that is part mand and part tact.

39. Give an example of a response that is part tact and part

intraverbal.

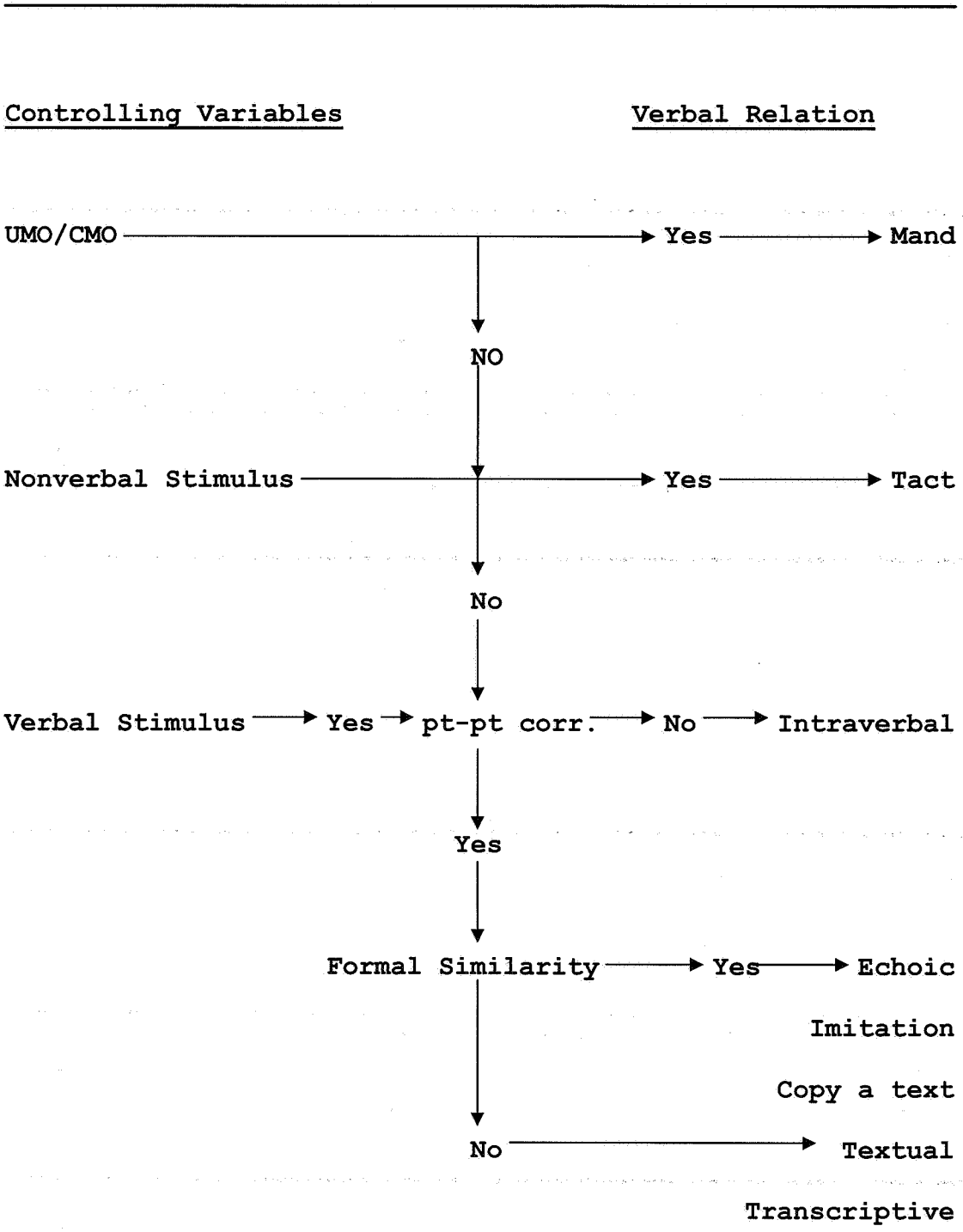
40. Give an example of a tact involving multiple responses.

41. Give an example of an intraverbal using writing.

42. Give an example of receptive language using sign language.

Answers: 1. T; 2. T; 3. M; 4. IV; 5. T/M; 6. M; 7. TX; 8. IV; 9. E; 10. IV; 11. IV; 12. TR; 13. T; 14. M; 15. IV; 16. IV/T; 17. M; 18. NV; 19. IV; 20. T/M; 21. NV; 22. IV; 23. IV; 24. M; 25. IV; 26. TR; 27. IV; 28. T/M; 29. T; 30. IV; 31. NV; 32. M; 33. M; 34. IV; 35. T. 36. "I want the red one"; 37. "Someone is smoking."; 38. "My throat is dry."; 39. "Macys." When asked "Wherre did you buy that?"; 40. That's a big burger!"; 41. A response to an email; 42. Stopping when someone signs "Stop."

Table 16.4 Verbal Behavior Classification Chart



Language Acquisition Barriers: Part 1

Mark L. Sundberg, Ph.D.
May 17, 2005

Language Acquisition Barriers
Mark L. Sundberg
May 17, 2005
(Draft Version)

A Verbal Behavior Analysis of Errors

In addition to the measurement of each of the verbal operants in a child's repertoire using the VB-MAPPs, it is extremely important to analyze the, errors, deficits, language barriers, and other variables that might be directly relevant to a particular child's language delays. The current tendency is to just assess what the child can do (e.g., 23 tacts) on the VB-MAPPS, which is certainly important information. However, what we really need to know in order to develop an appropriate intervention program is at what point do errors occur and why. If we do not know why a child is making errors it may erroneously be assumed that we just need more training trials on that operant, rather than a specific intervention program that is designed to ameliorate a specific language barrier.

The data obtained from a verbal behavior analysis of errors may provide the most critical information necessary for developing an appropriate language intervention program for a child. A verbal behavior analysis of language errors consists of an analysis of the antecedents, behavior and consequences related to the specific task (simply, a functional analysis of verbal behavior). The point at which errors occur may be considered the **operant level** of that repertoire. For example, the mand may become defective beyond two or three strong motivators. The analysis of errors beyond those mands would begin by looking to see if the target motivate variable actually does control the form of the response, or is the form of the response under the control of nonverbal or verbal discriminative stimuli, or other types of prompts? A child may ask for candy, but the MO may be actually stronger for Game Boy. Why did he ask for candy? It may be under intraverbal control rather than mand control. In another example, if the task consists of a receptive discrimination, does the vocal stimulus establish a nonverbal stimulus in the array as an S^D and evoke scanning on the part of the child? Does the child emit the appropriate conditional discriminations? Errors often occur because targeted antecedents do not produce the necessary change of other antecedents, and ultimately do not evoke the proper behavior, or the behavior comes under the control of inappropriate discriminative stimuli. An analysis of errors that occur with each of the verbal operants can provide specific information as to the nature of the verbal deficit and suggestions for intervention programs. Below are a few suggestions for common errors that occur in each component of a verbal behavior curriculum. (Note that these are in addition to the standard teaching errors such as the failure to generalize, or the failure to conduct adequate discrimination training, shaping, correction procedures, and so on.)

Language Acquisition Barriers
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Mand

Motivation (MO) does not control the response form
Prompt bound by physical, echoic, imitative, or verbal stimuli
No MO in effect for targeted item (e.g., satiation)
Not assessing the current MO
Weak MOs in general
No variation in captured or contrived MOs
Mand training not part of the child's early language training history
Negative behavior functions as mands
Curriculum poorly sequenced
Response requirement too high and weakens the relevant MO
Nonverbal stimulus acquires control and blocks MO control
Fading out the object/nonverbal stimulus too soon
Verbal stimulus acquires control and blocks MO control
Self-stimulation or obsessive behaviors compete with other MOs
Single topography functions as the mand (e.g., more, please)
Can't establish differential response topographies
Scrolling gets reinforced
Not enough mand trials
Poor audience control
Mands only required and reinforced in specific setting
Free or cheap access to reinforcers without manding
Small group of mands have strong history of reinforcement (e.g., candy, juice, skittles)
Verbal stimuli do not function as reinforcement (mands for information hard)
Manding not automatically reinforcing
Aversive history

Tact

Existing tact multiply controlled by verbal stimuli or MOs
Wrong source of control established (e.g., tacting verbs from pictures)
Single response tacts overconditioned
Articulation errors make differential reinforcement inconsistent
Scrolling gets reinforced
Prompt bound by inadvertent lip prompts
Tacting multiply controlled by CMO-R
Limited training with multiple S^Ds and multiple responses
Failure to establish the necessary types of multiple control for tacting
Verbal stimuli do not establish feature of nonverbal stimuli as an S^D (cond. discrim.)

Failure to analyze complexities of tacts like prepositions, pronouns, adjectives, private events, social behavior, etc.
Poorly sequenced curriculum

Poor audience control
Tacting not automatically reinforcing
Aversive history

Matching-to-Sample

Reinforcement history for position preference, guessing, repeating positions, etc.
Prompt bound by position, movement, eye, or pointing prompts
No reinforcement for first selection evokes change to correct selection
which gets reinforced
Failure to scan
Failure to make conditional discriminations
Overconditioned with a small array (limited array variation)
Stimuli in the array are characteristically very different
Stims with materials
Doesn't attend to materials
No instructional control
Curriculum poorly sequenced
Aversive history

Intraverbal

Child does not have a strong enough mand, tact, and RD repertoire
Doesn't attend to verbal stimuli (S-deltas)
Verbal stimuli evoke strong rote responses due to conditioning history
Echoic repertoire too strong (echolalia)
Not part of the previous curriculum
Nonverbal stimuli control response form (tact prompt bound)
MOs control response forms (strong IVs on favorite topics)
Poorly sequenced curriculum
Single stimuli and single responses overconditioned
Verbal stimulus classes not established
Verbal response classes not established
Verbal conditional discriminations not established
Out of context, irrelevant intraverbal training may establish an odd form of IV behavior
Poor audience control
No automatic reinforcement for IV behavior
Aversive history

Echoic

Doesn't attend to vocal stimuli
Poor instructional control
Can't emit certain sounds (no muscle control)
Irrelevant, out of context training history (pure echoic training)
Vocal stims interfere
Automatic punishment (or other forms of punishment)
No automatic reinforcement for vocal behavior

Repertoire too strong (echolalia, prompt bound)
Aversive (failure) history

Imitation

Prompt bound by physical prompts
Does not attend to visual stimulus
Poor motor control (e.g., CP, poor muscle tone)
Imitation training irrelevant to child and out of context (No MO)
Stims interfere
Imitation not automatically reinforcing
Aversive history

Receptive discriminations

Verbal stimulus does not evoke scanning (or attending to the array)
Verbal stimulus does not establish one item as an S^D in the array (cond. discrim.)
Position bias, last choice reinforced, guessing reinforcement history
Stims with materials
Overconditioned with limited array
Overconditioned with single response
No RFFC type training
Poorly sequenced curriculum
Aversive history

Other Langauge Acquisition Barriers

Defective scanning skills
Failure to make conditional discriminations
Scrolling responses
Prompt dependent
Escape/avoidance
Rote responding
Instructional control
Self-stimulation
Obsessive-compulsive behavior
Response requirements weakens EO
Reinforcement dependent
Does not attend to people
Does not attend to material
Negative behaviors
Lack of spontaneous verbal behavior

Language Acquisition Barriers--Part 3
Motivation, Reinforcement, and Incompatible
Behavior Assessment

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May 17, 2005

Score the following on a 0-5 scale

Types of Motivators

0. Motivation extremely weak with no identifiable reinforcers (UMOs nonfunctional)
1. A few UEOs effective, 1-3 items function as reinforcement, CRF schedule
2. UMOs and a few CMOs effective, 4-9 items function as reinforcement, VR 5 schedule
3. Many UMOs andCMOs, 10-20 items function as reinforcement, VR 10 schedule
4. Strong motivation, MO for missing items, mainly social reinforcement, VR 15 schedule
5. Strong and varied motivation, CMO for information, automatic reinforcement for Self-VB

Reinforcement Schedule

0. Nothing functions as reinforcement when work is required
1. Will work on continuous reinforcement schedule (CRF)
2. Will work on a Variable Ratio-3 schedule (VR)
3. Will work on a VR-10 schedule involving mainly learned reinforcers
4. Will work on a VR-25+ schedule
5. Automatically reinforced by working, praise main form of reinforcement

Type and Number of Reinforcers

0. Nothing functions as reinforcement when work is required
1. 1-3 items function as reinforcement, mainly unlearned reinforcers
2. 4-6 items function as reinforcement, mixture of unlearned and learned reinforcers
3. 7-15 items function as reinforcement
4. 16 or more items function as reinforcement, reinforcers regularly change
5. Mainly social and age appropriate reinforcers, significant variation

Incompatible Behaviors Assessment

0. High rates of aggression and SIB, unworkable
1. Frequent tantrums, crying, SIB, aggression, whining, running away, falling to the floor
2. Demands, removing reinforcers, or MOs (defective mands) frequently evoke tantrums, etc.
3. Occasional negative behavior, function clear, average 1 per day, episodes lasting 5+ mins.
4. Minor negative behavior, manageable, quick recovery, less than daily, no aggression/SIB
5. Minimal or no occurrences of negative behavior

The Verbal Behavior Approach to Language Training

Refinements in the Procedures

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Starting a Verbal Behavior Program

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Carl T. Sundberg
Judah Axe
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Agata Rozga

The Quick Language Assessment

Score the strength of the following on a 0-4 scale:

Compliance	Receptive
Mand	Tact
Motor Imitation	RFFC
Vocal Play	Intraverbal
Vocal Imitation	Letters and Numbers
Matching-to-Sample	Social Interaction

(Sundberg & Partington, 1998)

Language Acquisition Barriers
Quick Assessment Part 2

Score the prevalence of the following on a 0 (Not a Problem) to 4 (Significant Problem) scale:

- Defective Mand
- Scrolling Responses
- Prompt Dependent
- Echolalia
- Rote responding
- Response Requirement Weakens EO
- Escape/Avoidance
- Instructional Control
- Negative Behaviors

Language Acquisition Barriers
Quick Assessment Part 2

Score the prevalence of the following on a 0 (Not a Problem) to 4 (Significant Problem) scale:

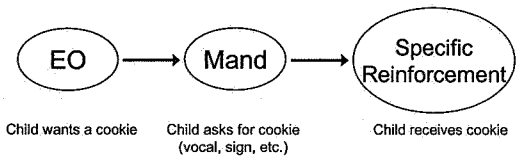
- Reinforcement Dependent
- Self Stimulation
- Obsessive Compulsive Behaviors
- Does Not Attend to People
- Does Not Attend to Materials
- Lack of Spontaneous Language

Motivation and Reinforcement
Quick Assessment Part 3

Score the following on a 0-4 scale:

- Types of motivators
  - unlearned (UEOs), learned (CEOs)
- Reinforcement schedule
  - CRF, VR
- Type and Number of Reinforcers

The Mand Relation



Child wants a cookie

Child asks for cookie (vocal, sign, etc.)

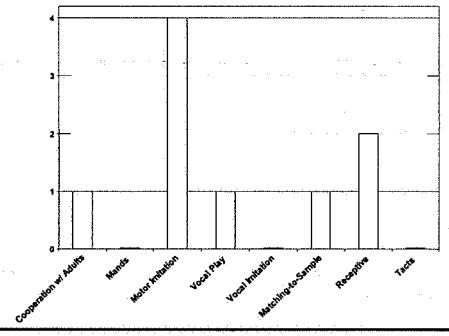
Child receives cookie

Defective Mand - Ally

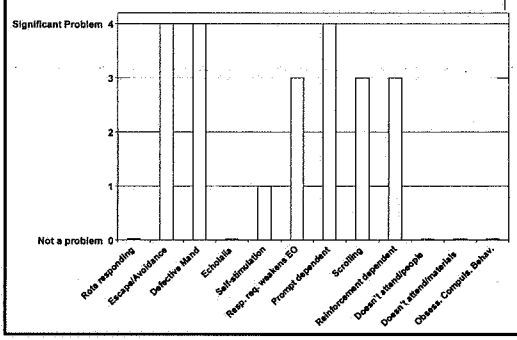
EO
"What do you want?" → Does not evoke a mand
Object

Intraverbal prompt
(e.g. "Sign cookie")
Imitative prompt
(ASL sign)
→ Evokes a response

Ally at Intake: Quick Assessment



Ally at Intake: Language Barriers



Intervention Strategies

- Curriculum
  - target skills: Mands, Imitation, Tacts, Matching; eventually RD
- Instructional control
  - mixed VB format, shorter sets of trials, high frequency of reinforcement
  - reinforcer sampling to determine EO
- Establish an effective mand repertoire
  - break mand free from verbal stimulus control and bring it under the control of the EO and object

Intraverbal Prompt Procedure