

## SPEECH-LANGUAGE PATHOLOGY AND APPLIED BEHAVIOR ANALYSIS

Indiana Speech-Language Hearing Association  
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### OBJECTIVES

- 1. Listeners will be able to apply basic principles of ABA to every day speech therapy.
- 2. Listeners will be able to describe the 4 verbal operants of ABA.
- 3. Listeners will be able to participate more confidently in the behavior goal/Functional Behavioral Assessments required by school districts.

### BACKGROUND

- Graduated from Ball State University
- School setting- all ages from preschool to high school
- PRN for Skilled Nursing Facility
- Private therapy

### SCHOOL SETTINGS, FBAS AND BIPS, OH MY!

- Discord between speech-language pathologists and behavior analysts in America.
- SLP is TOR and needs to conduct Functional Behavioral Assessments and write behavior plans.

## WHAT IS ABA?

**Applied behavior analysis (ABA)** is the science in which the principles of the analysis of behavior are applied systematically to improve socially significant behavior and experimentation is used to identify the variables responsible for behavior change.

Dead Man's Test

Attempts to understand, explain, describe and predict behavior

Antecedent-Behavior-Consequence

## WHAT IS A BOARD CERTIFIED BEHAVIOR ANALYST

- Must possess at least a master's degree
- May have a master's degree in behavior analysis or a related field and 15 credit hours of course work in behavior analysis
- Between 750-1500 hours of practicum
- National board; however not licensed or regulated; a credential that is increasingly recognized

## POPULATIONS WE TREAT

- SLP

Children with speech and/or language deficits secondary to autism, developmental delays, syndromes, cleft-palate, hearing loss, fluency disorder, TBI, Cognitive Deficits, vocal pathology

Adults with speech and/or language deficits secondary to stroke, PD, dementia, TBI, Cognitive Deficits

- BCBA

Children with communication deficits secondary to autism, TBI, Cognitive Deficits, syndromes.

Adults with Cognitive Deficits

Children diagnosed with learning disorders

Children and adults with undesirable behaviors (aggression, self-injury)

Fortune 500 companies

Human service animals

## SIMILARITY: WIDE SCOPES OF PRACTICE!

- Both SLPs and BCBAs have a much wider scope than just one area.
- Just because you are a BCBA, doesn't mean you only work with students with Autism.
- Same thing goes for an SLP.

## SERVICE DELIVERY DIFFERENCES

### Speech-Language Therapy (SLP)

Direct service delivery SLPs perform both evaluation and treatment.

### Verbal Behavior (BCBA)

Consultative model Evaluate progress, analyze data, change program as necessary. Therapy is typically administered by less qualified persons.

## UNDESIRABLE BEHAVIORS: A BCBA'S TERRITORY

- Behavior: The activity of living organisms; human behavior includes everything that we do
- **Access/Tangible**- To get a preferred item or participate in an enjoyable activity.
- **Escape/Avoidance**- To get out of doing something he/she does not want to do (or doesn't know how to do)
- **Attention**- To get focused attention from teachers, peers, staff members, etc.
- **Automatic Reinforcement**- The individual behaves in a specific way because it feels good to them.

## WHAT IS VERBAL BEHAVIOR?

- Verbal behavior is a conceptual language framework, NOT an instructional framework. It is based on the Skinnerian model of language, which describes the various FUNCTIONS of language
- Verbal behavior concepts are used with empirically validated teaching strategies (ABA principles) to evoke language.
- SLPs also use behavior principles: e.g., shaping, reinforcement to improve language

## VERBAL BEHAVIOR FRAMEWORK

- Verbal operant: types or parts of language defined by their function
  - Echoic/Mimetic (sign)- Imitation
  - Mand- Request
  - Tact-Label
  - Intraverbal- Conversational exchange

## ECHOIC/ MIMETIC

- Echoic's are common in the speech world when dealing with students who have Autism.
- However, we can use echoics to our advantage and turn echolalia into functional communication (mands)
  - We just need to use the framework behind behavior to do so!
  - Mimetic is just the term for using sign instead of a verbal response.

## MANDS

- A mand is controlled by a child's motivation.
- Mands receive reinforcement specific to the particular mand. You request "milk," you get "milk."
- Mands are very important because they are the only type of language that directly benefits the speaker.
- "Triple the Mands"

## MANDS

- Can be verbal, sign language, PECS or A Communication Device
- As child's language increases, so do the complexity of the mands
  - Asking "wh" questions
  - Mands can be used to teach all parts of speech (language) e.g., prepositions, adjectives

## ECHOIC TO MAND TRANSFER EXAMPLE

Therapist: Say "Cookie"  
 Student: "Cookie"  
 Therapist gives child a small piece of cookie  
 Therapist: Say "Cookie"  
 Student: "Cookie"  
 Therapist gives child another piece of cookie....SMALL

- Therapist: Say "Cookie"
- Student: "Cookie"

Therapist: WAITS.....JUST WAIT. Hold the cookie and wait.

## ECHOIC TO MAND TRANSFER EXAMPLE

- Student will likely say "Cookie". If (WHEN) they do, Give them the piece of the cookie and more!
- KEY POINT: The reinforcement for saying it on their own should ALWAYS be bigger than saying it after you say it.
- Find words that will be reinforcing for your students:
  - Swing
  - Go
  - Block or Toy
  - Bubbles

## TACTING

- The ability to label common items and actions with the item/activity present
- Communicates what the person sees, hears, tastes, and smells
- Vocabulary/speech dependent

## INTRAVERBALS

- Language based on language.
- Includes conversations (answering questions, participating in reciprocal conversation)
- Early intraverbals may include:
  - filling in the blanks
  - finishing song lines
  - association pairs

## THE CASE FOR A VERBAL BEHAVIOR FRAMEWORK TO LANGUAGE TREATMENT

- Verbal Behavior teaches us about the functions of language
- When all functions are addressed, language programming is more comprehensive
- Research indicates skills do not transfer across functions (i.e., a child may be able to label but not request for an item)

## ERRORLESS TEACHING

- Errorless teaching means using immediate and frequent prompts to ensure the student provides the correct response each time.

**Language**  
 Therapist: What's this? (Point to picture of cow)  
 Child: Horse  
 Therapist: What's this? Say "Cow"  
 Child: Cow  
 Therapist: Yes! This is a cow!  
 Reinforcement, etc.

**Articulation**  
 Therapist: What's this? (Point to picture of cow)  
 Child: Tow  
 Therapist: What's this? (Use visual cue, or verbal cue before you let them respond.) Say "Cow"  
 Child: Cow  
 Therapist: Yes! This is a cow!  
 Reinforcement, etc.

## SLP TALK

- "Your child presents with severe expressive, receptive, and pragmatic language disorders. We must build up his vocabulary, teach him to follow simple one-step directions, and engage in simple turn-taking behavior:"

## BCBA TALK

"Your child has a poor manding repertoire. We must teach him how to mand and increase his use of them. We also want to make sure that we teach across the operants, so we'll teach him to tact his mands and mand for his tacts."

## BEHAVIOR ANALYST'S APPROACH TO LANGUAGE

- Evidence Based
- Data driven
- Errorless learning
- Intensive, individualized instruction
- Expressive language
- Generalization procedures
- Positive consequences

## OPERANT BEHAVIOR

- Behavior that is selected, maintained and brought under stimulus control as a function of its consequences; each person's repertoire of operant behavior is a product of his history of interactions with the environment.
- vs. respondent behavior (i.e., a reflex)

## OPERANT BEHAVIOR AND BA

- Behavior analysis seeks ways that environmental factors influence behavior

### Three-term contingency

- Operant behavior always occurs as part of a contingency
- Refers to the relationship of the antecedent (events prior to the behavior), behavior, and consequences (events after the behavior) of the behavior
- ABC's of behavior analysis
- Behavior change (teaching) requires manipulation of one or more components of A-B-C

## ABA IN THE SCHOOLS

- Where do SLPs fit in?
- What is an FBA?
- Why do I need to know how to write an FBA?
- Are you a teacher of record?
  - Then you need to know how to write an FBA?

## ANTECEDENT INTERVENTIONS

- Should be done:
  - BEFORE an FBA is generated to see if it helps
  - DURING an FBA to develop an effective Behavior Plan (BIP)
  - AFTER an FBA as a means of providing interventions

## ANTECEDENT INTERVENTIONS

- Environment
- Change of schedule or structuring the day
- Use of highly preferred items
- Offering choices
- Altering instruction

## FUNCTIONAL BEHAVIORAL ASSESSMENT/ BEHAVIOR INTERVENTION PLAN

- A **Functional Behavior Assessment (FBA)** is a process that identifies specific target behavior; the purpose of the behavior; and what factors maintain the behavior that is interfering with the student's educational progress.
- A **behavior intervention plan (BIP)** is a plan that's based on the FBA. A BIP can help to replace problem behaviors with more positive ones. Here's what you need to know about behavior interventions and the BIP.

## AN FBA, AT A MINIMUM IS USED TO

1. Obtain a description of the problem behavior
2. Have a global and specific hypotheses as to why the problem behavior occurs
3. Give intervention strategies that include positive behavioral supports and services to address the behavior.

## WHAT DO YOU NEED FOR AN FBA?

- ABC Data
- Interviews
- Measurable Goals
- Replacement Behaviors

## ABC DATA COLLECTION

- Example of ABC Data Collection

Student Name: \_\_\_\_\_ Behavior: Operational Definitions Circle One: Mon Tues Wed Thurs Fri Date: \_\_\_\_\_

A:  
B:

| Time | Activity<br><small>(i.e., Math block, recess, lunch, etc.)</small>   | Antecedent<br><small>What happened right before the behavior?</small>  | Behavior<br><small>What happened after the student's ability to respond?</small>  | Consequence<br><small>What happened immediately after the behavior?</small>   | Student Response<br><small>What did the student do immediately after the consequence?</small>  | Initials |
|------|--|--|---|---|--|----------|
|      | <ul style="list-style-type: none"> <li>◦ Arrival</li> <li>◦ Ball</li> <li>◦ Centers</li> <li>◦ Carpet</li> <li>◦ Clean up</li> <li>◦ Dismissal</li> <li>◦ E.L.A.</li> <li>◦ Hallway</li> <li>◦ Other:</li> </ul> | <ul style="list-style-type: none"> <li>◦ Adult attention to</li> <li>◦ Math</li> <li>◦ Release</li> <li>◦ Reading</li> <li>◦ Snack/Lunch</li> <li>◦ Specials</li> <li>◦ Transition</li> <li>◦ Whole Class</li> <li>◦ Other:</li> </ul> | <ul style="list-style-type: none"> <li>◦ New Task</li> <li>◦ Materials</li> <li>◦ "Total No!"</li> <li>◦ Transition</li> <li>◦ Waiting</li> <li>◦ Park Space</li> <li>◦ Other:</li> </ul> | <ul style="list-style-type: none"> <li>◦ Changed activity or materials</li> <li>◦ Choice Provided</li> <li>◦ Ignored</li> <li>◦ Peer Attention</li> <li>◦ Personal Space Provided</li> <li>◦ Requested</li> <li>◦ Teacher Attention</li> <li>◦ Time Out/Rest</li> <li>◦ Verbal Reprimand</li> <li>◦ Other:</li> </ul> | <ul style="list-style-type: none"> <li>◦ Apologized</li> <li>◦ Continued/Requested</li> <li>◦ Original Behavior</li> <li>◦ Cried/Quit</li> <li>◦ Left Area/Activity</li> <li>◦ New Behavior</li> <li>◦ Requested Task Completed</li> <li>◦ Requested Task Intended</li> <li>◦ Original Behavior Dropped</li> <li>◦ Self-Stimulation/Meltdown</li> <li>◦ Tantrum</li> <li>◦ Verbal Protest</li> </ul> |          |

## INTERVIEWS

- General Education Teacher
- Social Workers
- Special Education Teachers
- Teachers Aids (if you have any in the classroom)
- Specialist
- Behavior Interventionists (ISS person?)
- Consider someone who can be objective
- Parent
- Student

## OPERATIONAL DEFINITION

- Physical aggression is defined as "pulling another person's hair with her fingers"
- Eloping is defined as "leaving the assigned area"
- NON-Example- throwing a tantrum, destroying the room

## HOW TO FIND THE FUNCTION

- Functional Assessment Screening Tool (FAST)
- Motivation Assessment Scale (MAS)
- Questions About Behavioral Function (QABF)

## MEASURABLE GOALS

**Goals should be based on the behavior we WANT to see.**

- Accepting No- When denied access to an activity/person/item, student will accept no, without engaging in behaviors of concern, independently, with a 95% success rate per week, for 3 consecutive weeks.
- Asking for a break/help- When student is presented with a situation that makes him/her feel uncomfortable, unhappy, etc., he will ask for a break independently, instead of engaging in behaviors of concern with a 95% success rate per week, for 3 consecutive weeks.
- Waiting- When told to wait for preferred items/attention/preferred task, student will wait for up to \_\_\_ minutes independently, without engaging in behaviors of concern with a 95% success rate per week, for 3 consecutive weeks.

## REPLACEMENT BEHAVIORS TO TEACH

- 1. Use of calming strategies to calm himself down when frustrated (breathing deeply, counting to 20, etc.)
- 2. Asking for help and waiting for help when he is confronted with a peer conflict or when the academic material is difficult for him.
- 3. Accepting "no" as a response or accepting redirection when given.
- Would you have a student on your caseload with a goal of correct production of /r/, but not teach him/her correct /r/ tongue placement?
  - Of course not...same for behavior. The goal is what we want, the SDIs include teaching them how to get there.

## NOW WHAT?

- FBA is complete
- Behavior Plan is in the IEP
- Determine who will teach the behaviors
- Collect Data
- Determine how often the team will meet to discuss behavior and interventions

## FINAL NOTES

- Speech and Behavior have a lot in common.
- Speech Therapists have A LOT to offer Behavior Analysts
- Behavior Analysts are not common in schools around here so we as SLPs have to help where we can.

## CONTACT INFORMATION

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