Behaviors: What are they and how do they affect my child’s education?

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Behavior

- Behavior - any directly measurable thing an organism does
- Dimensions:
  - Frequency
  - Rate
  - Duration
  - Latency
  - Inter-response time
- Must pass the “Dead Man’s Test”
Philosophy of ABA

• Behavior can be learned.
• Behavior can be either strengthened or weakened by the consequences.
• We can predict and change behavior when we discover the variables governing a particular behavior.
Applications of Behavior Analysis

- Verbal Behavior (Language)
- Self Help (Eating, Dressing, Toileting, etc.)
- Motor & Perceptual Skills
- Academics
- Play / Leisure Skills
- Social Interaction
- Independent Work Skills
- Minimizing Problem Behavior
Behavioral Excesses and Deficits in Children

- Some children may present with behavioral differences that interfere with everyday activities, including their learning and the learning of others.
- This can include behaviors that we see too much of (excesses) as well as behaviors that we do not see enough of (deficits).
  - Examples of excesses: yelling, hitting, spitting
  - Examples of deficits: asking for help, raising hand, sharing
- Analyzing behavior helps us identify how to change it.
Behavioral vs Non-Behavioral Explanations

• ABA uses antecedents / consequences to explain behavior
  – This is helpful, because we can manipulate cause & effect patterns

• Other fields may explain behavior in ways that are not helpful
  – Nominal fallacy
  – Reification
  – Affirming the consequence
Nominal Fallacy

Explaining behavior by naming it

Explosive Personality Disorder
Hitting

He hits because he has EPD.
He has EPD because he hits.
Reification

Explaining behavior by appealing to an entity whose existence cannot be proven
Affirming the Consequence

• If A, then B. B exists, therefore: A.

• Example:

  • People who have brain tumors have headaches. (True)
  
  • I have a headache, therefore, I have a brain tumor. (NOT necessarily true!)
Analyzing Problem Behavior

• Just one instance of problem behavior usually is not enough to determine the function

• We look for patterns of antecedents & consequences
  – What is the behavior “doing” for the child?
Topography vs. Function

- Topography – the form a behavior takes
  - Hitting, laughing, jumping, drawing, etc.

- Function – the reason why a person is engaging in a behavior

- **A very, very important concept:**
  - Behavioral topography is NOT indicative of behavioral function (McGill, 1999).
Problem Behavior

- Tangibles
- Attention
- Escape / delay something unpleasant
- Behavior itself produces satisfaction
Types of Assessments

Figure 27.1 FBA methods. The amount or value of each dimension or outcome identified within the arrows increases from the bottom to the top of the pyramid.

Diagram contributed by Rebecca Eldridge.

Indirect Functional Assessment

• Interviews
• Review of records
• Rating scales
  – Motivation Assessment Scale (MAS)
  – Functional Analysis Screening Tool (FAST)
  – Questions About Behavioral Function (QABF)
  – Be ware: These types of rating scales have been repeatedly demonstrated to be unreliable (Hanley, 2012)
Descriptive Functional Assessment

• Observation
• Sequential analysis of antecedents, behaviors, and consequences

Antecedent → Behavior → Consequence

• Generates a hypothesis as to why the behavior is happening
Sample ABC Data Collection

<table>
<thead>
<tr>
<th>Date:</th>
<th>Activity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time episode began:</td>
<td>Duration of episode:</td>
</tr>
</tbody>
</table>

**People Involved:**

<table>
<thead>
<tr>
<th><strong>Antecedent</strong></th>
<th><strong>Behavior</strong></th>
<th><strong>Consequence</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Denied access - told he cannot have something he wants (specify):</td>
<td>Crying</td>
<td>Blocking</td>
</tr>
<tr>
<td></td>
<td>Yell/scream</td>
<td>Withheld attention / ignored</td>
</tr>
<tr>
<td></td>
<td>Whine</td>
<td>Count and mand procedure</td>
</tr>
<tr>
<td></td>
<td>Hit others</td>
<td>Repeated demand until he complied</td>
</tr>
<tr>
<td></td>
<td>Kick others</td>
<td>Verbal prompt □ Gestural prompt</td>
</tr>
<tr>
<td></td>
<td>Grab others</td>
<td>Physical prompt</td>
</tr>
<tr>
<td></td>
<td>Push others</td>
<td>Moved onto another activity without requiring him to comply with original demand</td>
</tr>
<tr>
<td></td>
<td>Push/swat materials</td>
<td>Offered a break</td>
</tr>
<tr>
<td></td>
<td>Grab materials</td>
<td>Offered preferred sensory input</td>
</tr>
<tr>
<td></td>
<td>Flopping to floor</td>
<td>Offered food or preferred items</td>
</tr>
<tr>
<td>□ Demand – told to do something, including transitioning from one activity to another (specify):</td>
<td></td>
<td>Took away preferred items</td>
</tr>
<tr>
<td>□ Wants something he can have if he asked for it nicely (specify):</td>
<td></td>
<td>Took away upcoming events (recess, lunch, snack, etc.)</td>
</tr>
<tr>
<td>□ Other (specify):</td>
<td></td>
<td>Called parent</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Removed his shoes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical escort to another location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Physical restraint</td>
</tr>
<tr>
<td>□ Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Functional analysis

- Tests hypotheses regarding why the behavior might be happening
- Requires that the evaluator higher level of experience and expertise in comparison to indirect or descriptive assessments
- Functional analyses can be conducted safely and effectively in a variety of settings, including schools.
FUNCTIONAL ANALYSIS IN PUBLIC SCHOOLS: A SUMMARY OF 90 FUNCTIONAL ANALYSES

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Several review and epidemiological studies have been conducted over recent years to inform behavior analysts of functional analysis outcomes. None to date have closely examined demographic and clinical data for functional analyses conducted exclusively in public school settings. The current paper presents a data-based summary of 90 functional analyses conducted in public school settings from 2006 through 2009 for 69 students. Specifically, we present data on gender, age, race, diagnosis, topography of target behaviors, number of conditions, duration of sessions, duration of analysis, functional outcomes, setting, and person serving the role of therapist. Results suggest that functional analyses in schools are possible, practical, and produce results that are comparable to those in past research.

Key words: functional analysis, public schools, severe problem behavior
Using ABA to Decrease Problem Behaviors

• Through the manipulation of reinforcement, it is possible to decrease the occurrence of undesirable behaviors
  – What is undesirable or unacceptable may vary
  – The key to extinguishing problem behavior is determining WHY the behavior is occurring
    • This is referred to as the function of the behavior
Management of Undesired Behaviors:

• Determine:
  – **Why** is this person engaging in a given behavior? (FUNCTION)
  – **How** can we manipulate the environment to decrease the future frequency of this behavior? (Should be based upon function)
  – **What** replacement behaviors can be taught to meet this person’s needs?
Reinforcement

• Reinforcer – *increases* the future occurrence of that behavior

• Reinforcers vary across persons, settings, and behaviors

• Any reinforcer can be:
  – Positive or negative
  – Social or automatic
Social vs. Automatic

• Social – someone else is required to provide reinforcement
  – Socially mediated positive – “get items/attention”
  – Socially mediated negative – “escape”

• Automatic – reinforcer for behavior is the behavior itself
  – Automatic positive – “stimming”
  – Automatic negative – “self-soothing”, “self relief”
Preventing Problem Behavior: Attention / Access to Tangibles

- Give lots of attention and enrich the environment with fun things
- Teach a way for the child to ask for attention, activities, and items
Preventing Problem Behavior: Escape

- Pair tasks / materials with reinforcement
- Change the way instruction is provided, to make the tasks easier or more fun.
- Provide frequent reinforcement for good work.
- Do not allow the student to escape from work when s/he misbehaves.
- Teach the child ask for a break.
Preventing Problem Behavior: Self Stimulation

• Provide an enriched environment and get the child interested in other things
• Prevent the behavior from occurring by physical intervention (blocking)
• Teach the child to enjoy being with others and doing other activities to receive reinforcement
Preventing Problem Behavior: Medical Issues

• Take note when the behavior occurs (is it seasonal?)
• When a child has allergies or is ill, disruptive behaviors may occur.
• A medical provider may be able to find the cause of the behavior and treat it with medication, dietary changes, etc.
Extinction

- Extinction – failure to reinforce a behavior that has been reinforced in the past, ultimately leading to a decrease in the future frequency of that behavior.
- Extinction is **not** the same as ignoring!
- Loosely speaking, it involves doing the opposite of what you have done in the past.
- Extinction may not stop the behavior immediately. In fact, it is likely to get worse before it gets better (extinction burst).
Extinction: Access to tangibles

History of reinforcement:

Behavior → Tangibles

Extinction
Extinction: Access to attention

History of reinforcement:

Behavior → Attention

Behavior → Attention (Extinction symbol)
Extinction: Access to escape

History of reinforcement:

Behavior \rightarrow Escape

Behavior \rightarrow \text{Extinction} \rightarrow \text{Escape}
Extinction is most effective when….

- Used consistently every time
- Reinforcing intermittently under a variable ratio (VR) schedule of reinforcement will actually make the behavior WORSE than if you reinforced every time (FR1)
  - Examples:
    - Casino gambling
    - Child nagging
Monitoring Child’s Progress

• Take data:
  – Frequency
  – Duration
  – Latency
• Graph data
• Make decisions based upon the graph
Instances of Aggression Per Day When Told No

Begin treatment

Date

Frequency


Getting Support

• Working with certified behavior analysts is an ideal way to design & implement effective behavioral interventions

• If the child’s behavior poses a threat to him/herself or others, BCBA involvement is especially important
Behavior Analysis Certification Board (BACB)

- bacb.com
  - Helpful information about ABA
  - Registry of BCBAs, BCaBAs, and RBTs