



Behavioral Methodologies

Above and Beyond Therapy



Antecedent Interventions



Antecedent Manipulation

Definition:

Modifying the SD or motivating operation in order to decrease the likelihood of problem behavior before it occurs (ABC's of data!)

Set clear expectations right away!

Examples of Antecedent Interventions:

- Offering choice
- Prompting or errorless teaching
- Priming/prep-setting
- Use high probability sequence (behavior momentum)
- Non-contingent reinforcement or free access to leisure activities
- Contriving motivating operations by satiation vs. deprivation of reinforcement
- Visual supports
- Environmental modifications
- Manipulating the response effort



Examples in Practice

Challenging Situation

- Disruptive/noncompliant behaviors associated with doing homework or taking a bath
- Disruptive behavior when a learner is requested to complete 25 problems
- A client moves openly around the environment and puts dangerous things he encounters in his mouth

Antecedent Intervention

- Provide the learner a choice: “Do you want to do your homework first, or take a bath first?”
- Present 5 sets of 5 problems each providing reinforcement in-between
- Put harmful things out of reach, provide the client with a chewy, attach gates or locks to block dangerous items



Environmental Modifications

An antecedent intervention that involves modifying the individuals immediate environment.

- Re-arranging furniture
- Visual Schedules/timers
- Add/remove items
- Functional Communication Training (FCT)
- Token systems
- Shutting doors



Behavioral Momentum

- Also known as High Probability Command Sequence (HPCS)
 - Antecedent Strategy that increases compliant behavior
 - Present 1 to 3 high probability tasks with the same amount of praise/SR+ for the low probability task that you will present next.
 - Works best with: defiant tasks, non-compliance, toleration, prior to a difficult task, to regain attention, increase motivation, set client up for success

Example:

1. “Clap hands”...(model if needed) “Wonderful clapping hands!”
2. “Touch nose”.... (model if needed) “Super job touching nose! Tickle attack!” Give tickles.
3. “High five”...(extend hand as a model) “Thanks buddy!”
4. “Sit down” (low-p behavior), walk with student to desk, once seated, “You are sitting so nicely!”

<https://www.unl.edu/asdnetwork/virtual-strategies/behavior-momentum>

Functional Communication Training



Functional communication training is the process of teaching meaningful and function communication in a natural way to our clients.

- Replace difficult behaviors with suitable communication that's socially acceptable
- Used to teach and establish replacement behaviors for inappropriate or harmful behaviors such as aggression, escape/elopement, non-compliance.

FCT may not mean learning words; instead it means teaching a child to communicate in any type of suitable way.

Implementing FCT it is important to decide on a communication system that works for the client.

FCT includes:

- Gestures
- Sign Language
- Vocal language
- Use of pictures/icons; PECS



Premack Principle

- Are also referred to as “First/Then” principles
- “First clean up your toys, then you can go outside”
- “First hand me book, then I will read”
- Stating “no” constantly throughout session can decrease compliance and instructional control; using the Premack Principle allows you to give a yes with contingencies
- This method is effective as it gives control to the child and gives immediate preferred reinforcement



Teaching Strategies



Stimulus Prompts

Manipulating antecedent stimuli in order to cue a response paired with the SD.

- Modifying stimuli-size, proximity
- Gesturing, pointing, looking with eyes
- Errorless teaching

- Response Prompt-requires no additional physical item. Ex: verbal SD, modeling, physical guidance.
- Prompt/Stimuli Fading-Prompt Hierarchy, least to most, most to least
 - Examples: removing white paper under red block when learner masters matching that target
 - Fading Stimulus line tracing-solid straight line to broken line to highlighter, to independent



Discrete Trial Teaching

There are three aspects to DTT:

- 1) an initial instruction/demand/discriminative stimulus (SD) is placed,
- 2) a response occurs
- 3) reinforcement is provided to increase the likelihood of the correct response occurring in the future.

When a learner provides the desired response, he or she should be provided with some degree of reinforcement (either in the form of access to a desired tangible reinforcer, attention/social reinforcement, a token for a token economy board, etc.).




Naturalistic Teaching

Naturalistic teaching involves assessing the learner's motivation in the natural environment setting and then using that motivation to work on the skills when:

- A) motivation is at its highest
- B) when in a less structured/contrived setting.

This can be especially effective because it considers two very important principles of behavior: the role of the environment in behavior as well as the role of motivation in behavior.



Prompting Hierarchy

Natural Cue/Independence

Visual Prompt

Verbal Prompt

Gestural Prompt

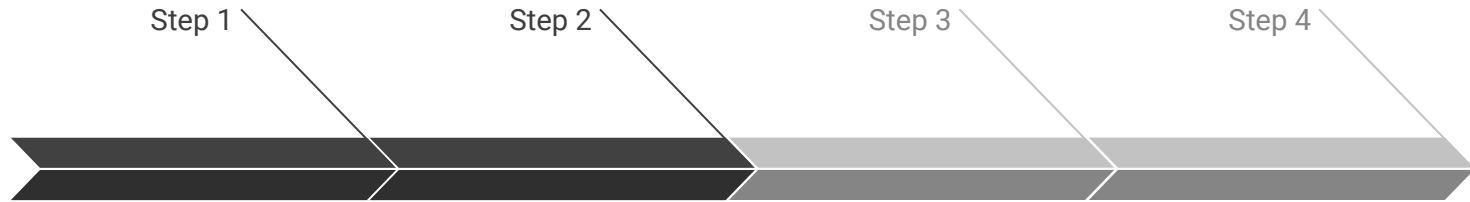
Modeling

Partial Physical Prompt

Full Physical Prompt



Error Correction Procedure



Error Correction Trial

Complete a trial as outlined on the previous slide.

Represent a New Trial

Re-present the instruction with a less intrusive prompt than the error correction trial

Distractor Trial

Insert a trial of a mastered or high-probability task to provide reinforcement

Re-present Initial SD

Run a trial of the initial SD from the error correction trial with no prompting



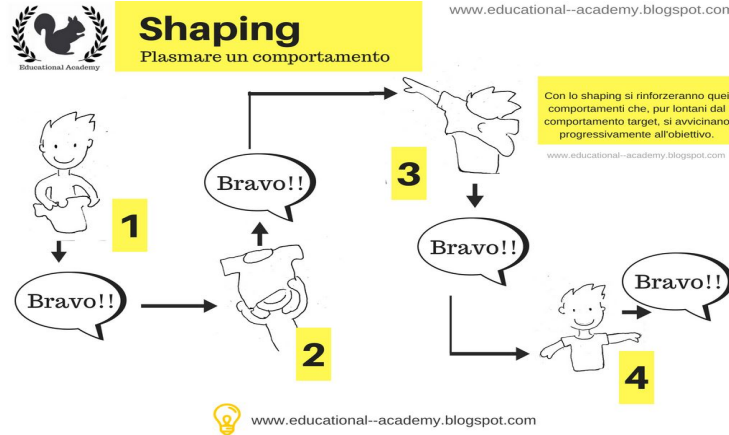
Errorless Teaching

In errorless teaching, we present the SD, immediately prompt the correct response, and then provide reinforcement.

In some instances of errorless teaching, we may use only one stimuli so the client isn't expected to discriminate the correct answer, or provide an array where any selection allows for the correct response.

Errorless teaching should be used when a client is showing errors on every (or almost every) presentation of a novel target, or when otherwise stated by the BCBA.

Shaping



- Shaping is defined as differentially reinforcing successive approximations towards a behavior
- For example, if an RBT is teaching a child with minimal verbal language to say “Dad,” the instructor will initially provide reinforcement if the child says “Duh.” As the child learns to expand upon this, such as saying “Da,” then the initial “Duh” is no longer reinforced but the sound of “Da” is reinforced and this is continued until the approximation is shaped to “Dad” and then “Da” is no longer reinforced and the ongoing expectation is for the child to say “Dad”.
- Shaping is effective for teaching many different skills
- https://video.search.yahoo.com/search/video;_ylt=AwrE_v05W5VlqslFq_7w8QF;_ylu=c2VlA3NlYXJiaAR2dGikAw-;_ylc=X1MDOTY3ODEzMDcEX3IDMgRyY3RuA2NsawRlc3JicHZpZAN6TldfcFRF40xgTHBxS3NFWW1zdXVTRFhPVGd1TVFBQlUFBQ0cxU3NQBGZvA2JlYWZlZQRmcllDc2E1Z3AEZ3BvaWQDUkRURwWURTVmivWk3S18xWWJnQQRuX3JzbHODNlAEb9zdWdnAzAEb3JpZ2luA3ZpZGVvLnNlYXJiaC55YWhvby5ib20EcG9zAzAECHFdHIDBHBxc3RybAMEcXN0cmwDMzMEXVlenkDYWJhTltdmlkZW9zJlTlwc2hlcGluZyUwMGV4YW1wbGVzBHRfc3RlcAMxNlUzOTU1NzZp=aba+videos+shaping+examples&ei=UTF-8&f2=ep%3As%2Cv%3AV%2Cm%3Asa&f=mcafee&type=E211US1274G0#action=view&id=18&vid=90e83e50d39174139762547a0bc689707

Chaining

- Chaining is a method in which a skill or behavior is taught by breaking down the oftentimes complex goal into small, multiple step directions that are specific.
- There are three main types of chaining techniques:
 - Total Task Chaining
 - Forward Chaining
 - Backwards Chaining

Total Task Chaining

- During total task chaining, the child learns the behavior or skill as a whole and is guided or prompted in each step. While the child is attempting to complete the skill on their own, the RBT or caregiver will give all the necessary prompts needed for the child to do the skill independently.
- Once the behavior or skill is completed, reinforcement is given.
- During subsequent trials, the RBT or caregiver would fade the prompts as appropriate.
- It is important that strong reinforcers are given at the end of the chain during total task chaining, as a way to reinforce the correct order.



Backwards Chaining

- During backwards chaining, all steps of the sequence are completed except the final step. During this step the client is taught the correct answer or skill and performs it independently. When the last step of the sequence no longer needs prompting and the child can complete it independently, the RBT or caregiver teaches the second to last step and so on until the sequence is completed.
- Backwards chaining can be reinforcing as the child received immediate reinforcement once they complete the first trial which is the last step of the sequence.



Forward Chaining

- Forward chaining is the method in which a child learns steps in the naturally occurring order. Every step of the sequence is taught and the child is taught how to do the first step or behavior. After the first step can be completed independently/without prompts, the child is taught the second step. This is continued until the child can complete each step independently.
- This method is effective as it uses behavior momentum as the child continues learning!





Role Play

RBTS will contrive different environments to allow a client to practice a skill that they struggle with in a different context. Often this is done at home when replicating school situations, or situations that trigger behaviors when RBTs are unable to work with a client. RBTs will also roll model behaviors and skills they wish a client to also do, this could be reasoning a hand, asking to go to a bathroom, or asking for a break.

Ex. Getting a haircut, completing a life silk, transitioning to a different environment



Video Modeling

Video modeling is a way to demonstrate a skill to a child. Often this is done by recording or showing an video of a same age peer, demonstrating a skill. This is more often done to teach play skills, as its hard for us as RBTs to role play how a child plays. Life skills are also typically taught through video modeling.

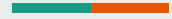
<https://www.youtube.com/watch?v=-fYuMzA9Js8>



Social skill training

Social skills training addresses a wide range of social skills. While there are many different ways to define social skills, in general, SST focuses on the rules and behaviors that help individuals interact with one another. This is often targeted so that clients can develop and maintain social relationships that are meaningful for them.

Includes eye contact, empathy, greeting, body language, and emotions



Reinforcement

Noncontingent Reinforcement



NCR is the presentation of a reinforcer, independent of the presence of a specific behavior. The client receives reinforcement on a set schedule instead of for a positive response.

- The child does not need to earn the reinforcement
- Helps reduce challenging behaviors

Contingent vs Noncontingent

- Contingent reinforcement is contingent on behaviors
- There needs to be a clear expectation
- Should be extra for the student, not a part of their normal routine
 - Keeps client motivation
- **Noncontingent reinforcement is not dependent on a behavior**
- NCR can act as a reset for clients; it can serve as a hook for more. Can lead to a more success learning environment

Differential Reinforcement



Differential reinforcement is reinforcing a target behavior while withholding reinforcement from an unwanted behavior. The goal is to replace unwanted behaviors with desirable behaviors.

The theory behind differential reinforcement is that people tend to repeat behaviors that are reinforced or rewarded and are less likely to continue behaviors that aren't reinforced.

Some types of Differential Reinforcement:

- DRA
- DRI
- DRO
- DRL

All differential reinforcement has the same purpose and the same goal; but there are various circumstances in which the RBT will reinforce the client and specific ways in which they will do so.



Contingencies

- Contingencies are defined as the relationship between two events, one which is “contingent” or a consequence of the other event.
- Contingencies can be used to increase desired behaviors, replace behaviors, or eliminate behaviors.
- To create reliable contingencies, the RBT must be consistent and quick with reinforcement and communicate effectively about expectations.
- Example of a contingency: Sarah understands that she must say excuse me to receive attention from adults, when Sarah does not say excuse me she is not provided any attention.



Schedules

Reinforcement Schedules: Two main types of schedules

- Continuous reinforcement (CRF)- reinforcement is provided for every correct response. Most frequently used for teaching new skills and quick learning.
- Intermittent Reinforcement-reinforcement is provided for some, not all correct responses. Used for maintaining
 - Fixed Ratio (FR)- reinforcement is provided on a fixed number of responses, if FR2, reinforcement is provided every 2nd correct response
 - Varied Ratio (VR)-reinforcement provided on average number of correct responses VR4=SR+ after 3, 6, 2, 4
 - Fixed Interval (FI)-reinforcement after a specified amount of time. FI 3 minutes
 - Varied Interval (VI)-reinforcement after an average amount of time. VI 5 minutes, SR+ after 2:30, 4:00, 5:30

Redirection



Redirection is an ABA behavior reduction technique used to distract the child from a problem behavior, or lead them to engage in a more appropriate behavior than the one they are currently engaging in.

It is easier to prevent a problem a behavior than to react to one.

Redirection is a way to distract the child from the problem behavior they want to engage in; remind the child they can make better choices, or present alternative ways to meet the same function of the problem behavior.

“Stop” statement vs “go” statement

Reinforce the redirected!

Redirect to something similar!

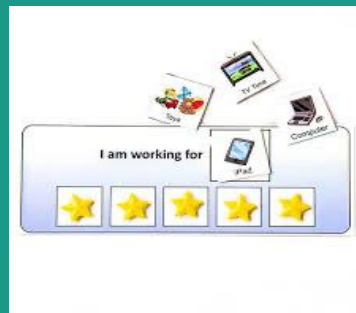
Join the activity with the client when redirecting!

Be quick on the draw!



Supports

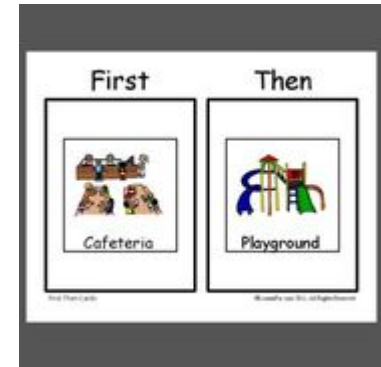
Schedules can also include: visual, written, verbal, Premack Principal, token systems



21st century parenting

Visual Aid

- Visual Aids are anything used during session that can be seen that aids in a child's development towards goals.
- Often times visuals that we use are Visual Schedules and Choice boards but can also include step-by-step picture instructions e.g. hand washing, visual lists, or certain objects that can indicate the need for a behavior or action.





Behavior Contract

Often done for higher functioning learners, a contract is created by a BCBA outlining appropriate and inappropriate behaviors. The client is actively involved in the process and chooses what their rewards will be when they complete all of the expected behaviors. The contract outlines any or all punishments that will occur if it isn't met. Both the RBT and the client sign the contract, and it is put in spots the client frequently sees, to remind them of the expected rules.

_____ 's Behavior Contract

I, _____, promise to start showing the following positive behaviors:

I will _____

I will _____

I will _____

If I do a good job of reaching these goals, my rewards will be:

- _____
- _____
- _____

If I do *not* reach these goals, my consequences will be:

- _____
- _____
- _____

What I need to start doing to be successful in reaching my goals:

What I need from others in order to reach my goals:

We will check back on _____ to review my progress towards my goals.

Adult Signature

Child Signature



Date

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Self Management vs Self Monitor

Self-Management: Can be used to change behaviors with topographies that make them inaccessible to others. A client is taught skills on regulating emotions and or behaviors, and when they identify that they are feeling out of control or not at their baseline the client can pick an activity to self-regulate. The goal is to have the client identify the problem and to self-identify a way to fix the problem without engaging in maladaptive behaviors.

Self-monitor: The client observes their own behavior and records the occurrence or non-occurrence of a target behavior. A set duration (usually 15-20 minutes) or period of time is identified, and the client self identifies if the target behavior occurs or not throughout the interval. Examples of behaviors include studying, nail biting, eating, etc.



References

- Cooper, J., Heron, T. and Heward, W., 2007. Applied behavior analysis. 2nd ed. Upper Saddle River, Nj: Pearson.
- This presentation was created by Megan Kuehler, BCBA, Brittany Shillington, RBT, Jaime Todd, RBT, McKenzie Ford, RBT and Tory Tammen, RBT for training purposes for Above and Beyond Therapy