EFFECTIVE REINFORCEMENT AND BEHAVIOR CHANGE

Federal Programs Conference
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Learner Outcomes

1. Demonstrate an understanding of characteristics and variables of reinforcement as they relate to the motivation of the learner to respond.

2. Explain the importance of motivation when teaching.

3. List and describe components of matching law using the mnemonic acronym VERMI: value, effort, rate, magnitude, and immediacy.

4. Conceptually identify the following; reinforcement, reinforcer, differential reinforcement, extinction, punishment

5. For each learner to have at least one “a-ha” moment during the lecture.
GETTING TO KNOW THE BASICS

- Behavior
- Reinforcement vs. Reinforcer
- Primary and Secondary Reinforcers
- Positive Reinforcement
- Negative Reinforcement
- Extinction
- Differential Reinforcement
- Punishment
- ABC contingency
BEHAVIOR

- Typically, any use of the striated muscles.
- Operates on the environment, it produces some effect on the environment.
- The frequency of behavior is determined by its history of consequences.
- Socially appropriate and socially inappropriate
Reinforcement vs Reinforcer

- **Reinforcer:** ANY stimuli (a detectable change in the environment) that follows a behavior and increases the rate or the probability of the behavior occurring in the future.

- **Reinforcement:**
  - A scientific principle. Just like gravity!
  - A procedure. “I provided reinforcement each time Sophia said OK and used the back sound of “k”.”
Primary and Secondary Reinforcers

- **Primary (unconditioned):** No learning involved. Food, drink, warmth, sexual pleasure.

- **Secondary (conditioned):** Learned, paired with primary reinforcers or other secondary reinforcers.
  - Social praise, money, tokens, watching a movie, listening to music, restoring a beat up old car, vacuum cleaners

- **Pairing**

**Pairing**
Pairing and more Pairing
Positive and Negative Reinforcement

- Positive Reinforcement: Applies Stimulus
- Negative Reinforcement: Removes Stimulus
- Positive Punishment: Increases the frequency of desirable behavior
- Negative Punishment: Decreases the frequency of undesirable behavior
Punishment

- **Positive Reinforcement**: Applies Stimulus
- **Negative Reinforcement**: Removes Stimulus
- **Positive Punishment**: Decreases the frequency of undesirable behavior
- **Negative Punishment**: Increases the frequency of desirable behavior

Reinforcement

- Increases the frequency of desirable behavior

Punishment

- Decreases the frequency of undesirable behavior
PUNISHMENT

- Decreases Behavior
- Ethical responsibilities when using punishment.
- Punishment usually doesn’t work well over time. Why?
  - It does NOT teach the appropriate response or skill. Think about what it models for the student to use in their relationship with others.
  - The power of punishment to suppress behavior usually disappears when the threat of punishment is removed
  - It triggers escape or aggression
  - Fosters resentment and undermines relationship
  - It makes learners apprehensive, which then inhibits learning appropriate responses. Learned helplessness
  - Can lead to failure set (a decrease in overall responding).
  - It tends to be applied unequally and for varied responses.
  - Behavior being punished decreases in the environment it is being punished in but tends to not decrease in other environments.
EXTINCTION

- Withholding of reinforcement. In order to do this you must know what the reinforcer is. Attention vs. Biting self
- Not planned ignoring
- Not ethical to use this in isolation, behavior serves a purpose.
- Can be difficult to implement.

EXTINCTION BURST

- Often used in combination with reinforcement. This reinforcement procedure is known as differential reinforcement.
Differential Reinforcement

Two or more behaviors, one is reinforced and the other(s) placed on extinction.

DRA – Alternative (appropriate alternative)
DRI – Incompatible (physically incompatible)
DRO – Other or Omission (absence of problem behavior during specific intervals)
DRH – High Rates (increasing low rates)
DRL – Low Rates (decrease rates but not eliminate)
### ABC Contingency

#### Examples of A-B-C Contingencies

<table>
<thead>
<tr>
<th>Antecedent A</th>
<th>Behavior B</th>
<th>Consequence C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights off; dark room</td>
<td>Turn on switch</td>
<td>Lights on; well-lit room</td>
</tr>
<tr>
<td>Not prepared for meeting; anxious</td>
<td>Review documents; prepare</td>
<td>Well prepared for meeting; confident</td>
</tr>
<tr>
<td>Printer not working; can’t print materials</td>
<td>Refill tray; un-jam paper</td>
<td>Printer working; can print materials</td>
</tr>
<tr>
<td>Not signed into Outlook; no access to email</td>
<td>Sign into Outlook</td>
<td>Signed into Outlook; have access to email</td>
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<tr>
<td>Warned not to do something</td>
<td>Do it anyway</td>
<td>Punished for insubordination</td>
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<td>On conference call with prospective client and in the presence of the CEO, VP of sales, direct supervisor, and project manager</td>
<td>Click pen annoyingly; repeatedly and loudly</td>
<td>Death stare from VP of sales</td>
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<td></td>
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<td>Poor impression made on CEO</td>
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<td>Rush of fear/anxiety regarding future employment with organization</td>
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<td></td>
<td></td>
<td>Thought: “Is my resume up-to-date?”</td>
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DATA DRIVEN

- ALL interventions put in place to change behavior should be data driven.
- Collect a baseline
- Collect data as frequently as possible, preferably daily
- Analyze the data
VERMI

- V = Value.
- What is valuable one minute may not be valuable the next. Must assess frequently and pay close attention to the immediate effectiveness of the consequence. Is it still valuable?
- Preference assessments
- Satiation and Deprivation
- Motivating Operations: “Setting Events”
  - Have either an abative or evocative effect on behavior
  - Either increase or decrease the VALUE of the reinforcer.

ASK this. Am I using the MOs of the child to guide reinforcement?”
VERMI

- E = Effort
  - The amount of effort a person has to exert to access reinforcement
  - 80 - 20 rule
  - Demand Fading
  - Ask this question when things begin to fall apart? Was I presenting too many hard demands, making the effort outweigh the payoff?"
VERMI

- R = Rate
- Behaviors that are reinforced more often than others will be more likely to occur again in the future. When reinforcement is delivered too infrequently, the learner’s responses may decrease or end all together.
- Continuous (CRF)
- Intermittent (Fixed and Variable)
- Was my schedule of reinforcement too thin?"
VERMI

• M = Magnitude or Size, How much
• A learner will be more likely to perform behaviors that earn him more reinforcement than he would a behavior that produces less reinforcement.
• Judy example. Assignment = No quiz
VERMI

- I = Immediacy
  - Typically within 2-3 seconds of the behavior occurring.
VERMI “C”

- C = Contingently

- Define the behavior

"Before anything else, preparation is the key to success."

~ Alexander Graham Bell
Reinforcer Qualities

- Easily delivered
- Quickly consumed or naturally terminated
- Given in small quantities to avoid satiation
- Repeatable and able to reinforce multiple times
- Controllable and deliverable by the teacher
- Do not require the teacher to remove them
- Are more fun when you are around to do it with them than when you are not around
IMAGINE THE POSSIBILITIES

If we all used

REINFORCEMENT EFFECTIVELY
Resources

- Reinforcer assessment and potential reinforcer list
  - ..\Reinforcer Reinforcement\Potential Reinforcer 2 list.docx
  - ..\Reinforcer Reinforcement\Forced Choice Reinforcement Menu.pdf

- Setting Event Checklists:

- Preference Assessments

- Intervention Tools
  - http://www.pbisworld.com/
REFERENCES


- [https://autismtrainingsolutions.wordpress.com](https://autismtrainingsolutions.wordpress.com)


Taking A Break