
EVIDENCED BASED PRACTICE
ABA and what you can do
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Requires financial, clinical and educational resources and expertise
Decreasing the research to practice gap
Effective, evidence based methods of treatment
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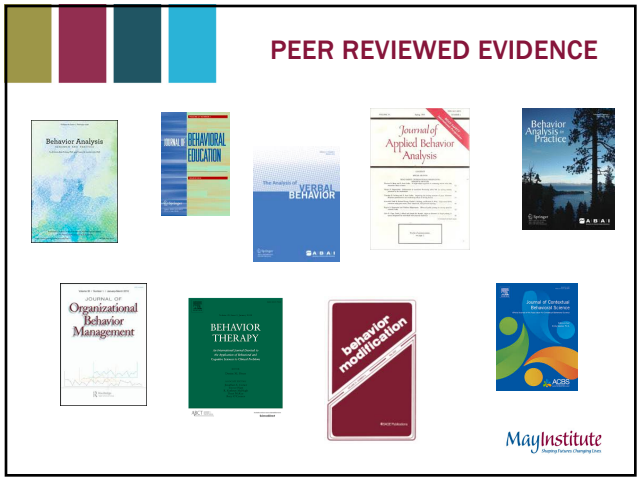
PEER REVIEWED EVIDENCE
Behavior Analysis
JOURNAL OF BEHAVIORAL EDUCATION
The Analysis of VERBAL BEHAVIOR
Journal of Applied Behavior Analysis
Behavior Analysis in Practice
JOURNAL OF Organizational Behavior Management
BEHAVIOR THERAPY
behavior modification
Journal of Contextual Behavioral Science
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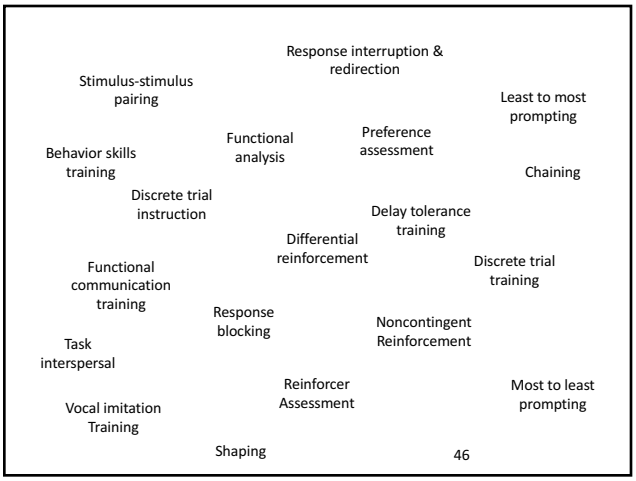
Response interruption & redirection
Stimulus-stimulus pairing
Least to most prompting
Behavior skills training
Functional analysis
Preference assessment
Chaining
Discrete trial instruction
Delay tolerance training
Differential reinforcement
Functional communication training
Discrete trial training
Response blocking
Noncontingent Reinforcement
Task interspersal
Reinforcer Assessment
Most to least prompting
Vocal imitation Training
Shaping
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NATIONAL STANDARDS PROJECT

- At least two group designs
  - from two different research groups

OR

- At least five single case designs
  - *At least three different research groups*
  - *At least 20 participants across studies*

OR

- Combination: At least 1 group & 3 single case
  - *Across two different research groups*
  - *At least 20 participants across studies*

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NSP CONTINUED

Antecedent Intervention	32 (15)	Naturalistic intervention	10 (1)	Self-management	10 (3)
CBT	4 (0)	Parent training	20 (0)	Social narratives	17 (10)
Differential reinforcement	26 (3)	Peer-mediated intervention	15 (10)	Social skills training	15 (5)
Discrete trial teaching	13 (2)	PECS	6 (3)	Structured play groups	4 (2)
Exercise	6 (3)	PRT	8 (4)	Task analysis	8 (3)
Extinction	11 (2)	Prompting	33 (9)	Technology aided instruction	20 (9)
FBA	10 (5)	Reinforcement	43 (8)	Time delay	12 (5)
FCT	12 (3)	RIRD	10 (0)	Video modeling	32 (9)
Modeling	5 (1)	Scripting	9 (0)	Visual supports	18 (10)

INFORMED PRACTICE

- Research from behavior analysis
  - Experimental analysis of behavior
  - Applied behavior analysis
- Implementation Science
  - How do we get a "good idea"
    - Adopted
    - Implemented at scale
    - Sustained
    - Implemented with fidelity

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ESTABLISHED TREATMENTS

- Interventions based on ABA
- There is *more* scientific evidence (controlled studies using generally accepted scientific methodology, published in peer-reviewed journals) that demonstrates the effectiveness of interventions based up ABA than any other intervention for people with ASD

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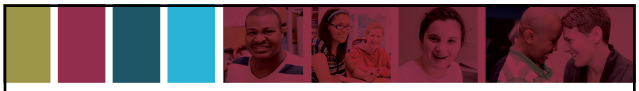

ABA is a systematic approach to the understanding of behavior that relies on determinism as its fundamental assumption, empiricism as its prime directive, experimentation as its basic strategy, replication as its necessary requirement for believability, parsimony as its conservative value, and philosophic doubt as its guiding conscious.

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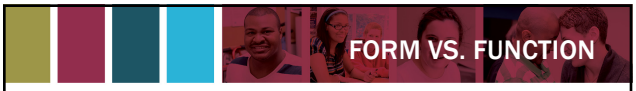

FORM VS. FUNCTION

- Form (topography)
  - What a behavior looks like
  - How the results are produced
  - Some behaviors look the same but produce different results
- Function (why)
  - What results the behavior produces
  - Some responses serve similar functions but do not need to have the same topography

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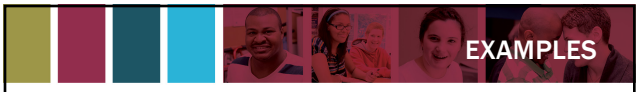

EXAMPLES

- Pushing a door open with your foot
- Using hip to open door
- Using hand to push door open

- Putting arm to gain attention
- Putting arm up to disrupt classroom
- Putting arm up to relieve pain

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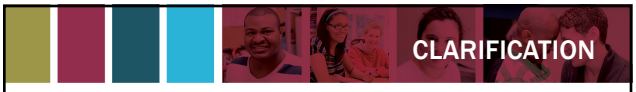

CLARIFICATION

- Reinforcement
  - A consequence
  - Presented contingent on a response
  - Increases the future likelihood of that response
- Reinforcer
  - Stimulus that when presented contingent on a response
  - Increases the future likelihood of that response

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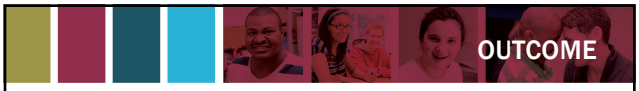

OUTCOME

- Under similar circumstances in the future, the behavior will occur again
- What this means for us
  - If a behavior continues to occur, it IS being reinforced
  - If the behavior was not being reinforced, it would occur less often (and eventually stop occurring)

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TROUBLESHOOTING

- When a behavior does not continue to occur
- Potential reasons
  - It is not being reinforced (the consequence is not reinforcing)
  - It is not being reinforced often enough
  - Other reinforcers for other responses are more powerful –competition
  - Changes in motivation
  - Punishment or threat of punishment may be overpowering

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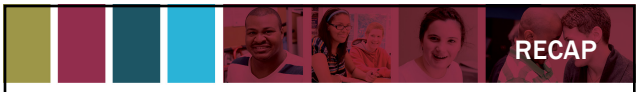

RECAP

- So how do you know if something is a reinforcer?
- How does this apply to children we work with?
- What sorts of conclusions can we draw about students appropriate and inappropriate behavior

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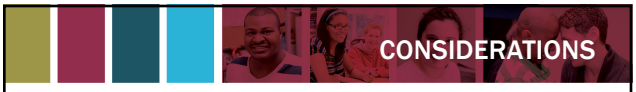

CONSIDERATIONS

- Immediacy of reinforcement
  - Reinforcers are most effective if they immediately follow the behavior to be reinforced
  - Why?
- 'Schedule' of reinforcement
  - How often a response is reinforced
    - Every time it occurs . . . Every other time . . . Almost never . . .

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AS GOOD AS IT GETS

- Quality
  - How 'good' the reinforcer is
  - Enthusiastic vs. neutral praise, Godiva® vs. Hersheys® chocolate
- Quantity
  - How much is delivered (bite of cookie vs. whole cookie)
  - How long it is delivered (30-s vs. 10-min)

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DISTINCTIONS

- Can be helpful to think about different types of reinforcement
- Positive reinforcement – think "gain access"
- Negative reinforcement – think "escape" or "avoid"

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PREFERENCES

- Stimuli can be a reinforcer for one person, can also function as a negative reinforcer for another… Cake and ice cream
- Social attention (recognition for a job well done)
- Physical interaction (high fives or pat on the back)
- Loud video games

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LEARNING

- Unconditioned or primary reinforcers are those reinforcers that everyone needs
  - Warmth, food, water, shelter, etc.
- Conditioned or secondary reinforcers are things that have been paired with primary or other conditioned reinforcers
  - Toys, games, tokens, many activities

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MEDIATION
• Social reinforcement involves some sort of interaction with other people
– Any form of physical attention or gaining access to avoiding contact
• Nonsocial reinforcement has nothing to do with other people
– Happens even when other people are not around
– e.g., stereotypies (repetitive behaviors)
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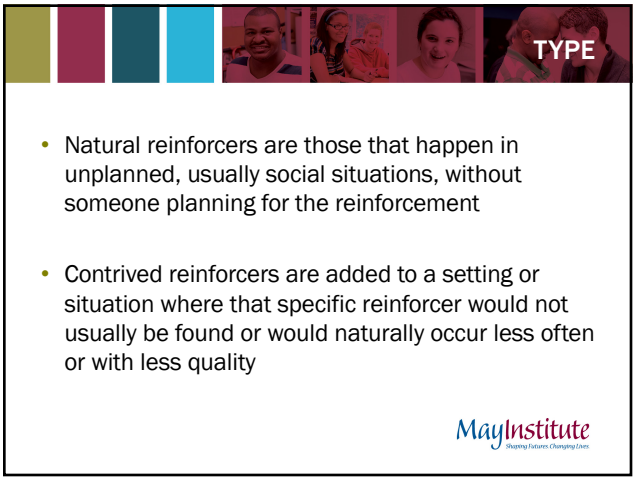
TYPE
• Natural reinforcers are those that happen in unplanned, usually social situations, without someone planning for the reinforcement
• Contrived reinforcers are added to a setting or situation where that specific reinforcer would not usually be found or would naturally occur less often or with less quality
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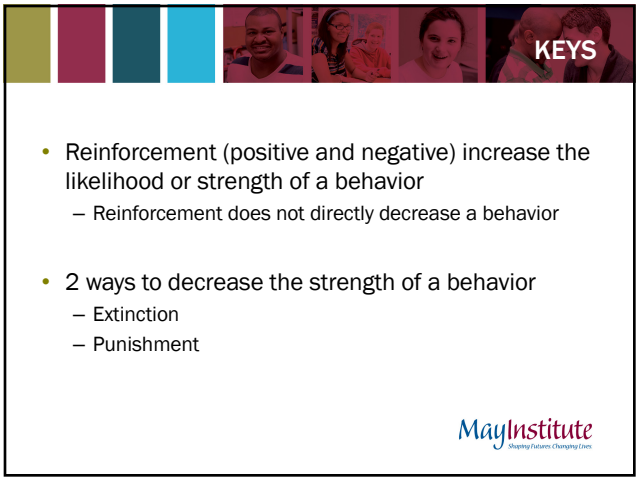
KEYS
• Reinforcement (positive and negative) increase the likelihood or strength of a behavior
– Reinforcement does not directly decrease a behavior
• 2 ways to decrease the strength of a behavior
– Extinction
– Punishment
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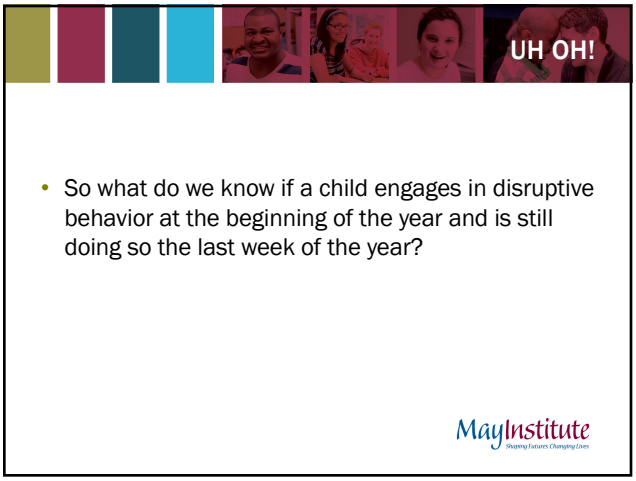
UH OH!
• So what do we know if a child engages in disruptive behavior at the beginning of the year and is still doing so the last week of the year?
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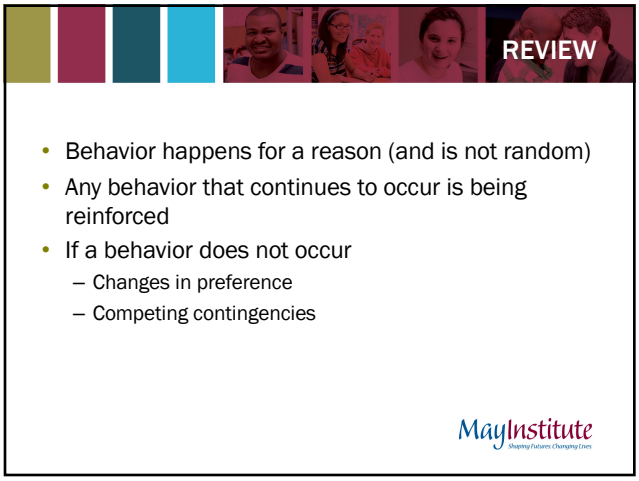
REVIEW
• Behavior happens for a reason (and is not random)
• Any behavior that continues to occur is being reinforced
• If a behavior does not occur
– Changes in preference
– Competing contingencies
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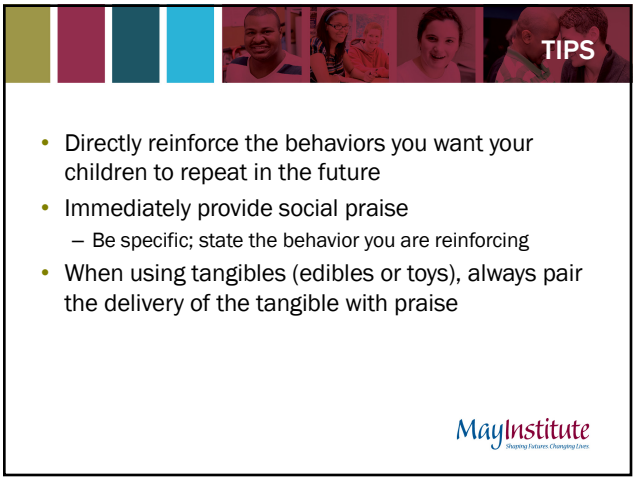
TIPS
• Directly reinforce the behaviors you want your children to repeat in the future
• Immediately provide social praise
– Be specific; state the behavior you are reinforcing
• When using tangibles (edibles or toys), always pair the delivery of the tangible with praise
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SUMMARY
• Both positive and negative reinforcement can be used with our children to increase good behavior
• Make sure you know what is reinforcing for your children
– No one size fits all
• Reinforce good behavior BEFORE inappropriate behavior can occur
– (not the candy bar in the grocery store)
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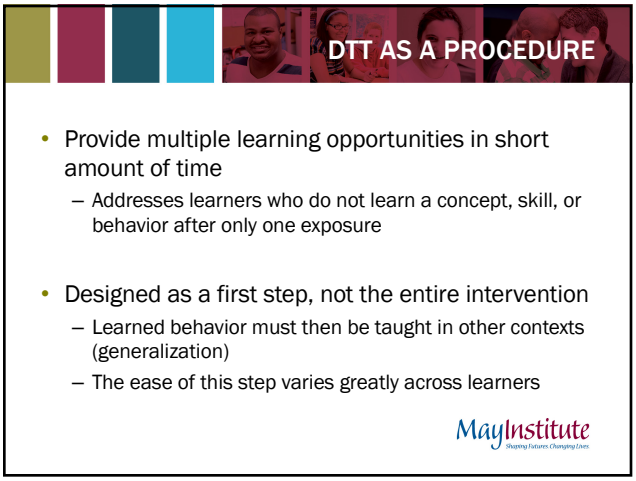
DTT AS A PROCEDURE
• Provide multiple learning opportunities in short amount of time
– Addresses learners who do not learn a concept, skill, or behavior after only one exposure
• Designed as a first step, not the entire intervention
– Learned behavior must then be taught in other contexts (generalization)
– The ease of this step varies greatly across learners
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DTT BLENDS

- Any GOOD behavior analyst would look at discrete trial teaching as just a first step in teaching an important behavior
  - AND would not use discrete trial teaching if the learner was successful in less structured settings
- Discrete trials are used to ensure the learner focuses on only the exact thing being taught (e.g., to break down complex skills)

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ABC: SAY WHAT?

- Discrete trial includes several components:
  - Discriminative stimulus (antecedent)
  - Response (prompted or not)
  - Consequence (reinforcement or error correction)
  - Inter-trial Interval (tiny break to separate the trials)

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CONSIDERATIONS

- Stimulus array size
- Stimulus presentation order
- Stimulus arrangements (matrix, equivalence)

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MOVING FORWARD

- More is not always better
- Differentiate critical and ideal features
- Be open to alternatives
- Make your skills as a scientist invaluable

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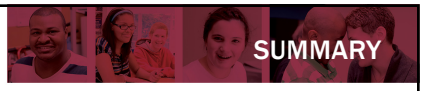

SUMMARY

- Careful examination can help address differences and facilitate success
- Choose strategies that are specific to each learner through assessment
- Research needs to focus on which procedures work for which children
- Research needs to focus on interventions when difficulties are encountered

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Acknowledgments and Partners

- Council on Autism Service Providers
- Florida Institute of Technology
- National Autism Center
- National Standards Project

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For more information about the National Autism Center (and free downloads of NSP I & II)
www.nationalautismcenter.org

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