

UNIVERSITY OF
LOUISVILLE®

KENTUCKY AUTISM
TRAINING CENTER 

Using Reinforcement Strategies Across all Environments

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Today you will....

- Leave with an understanding of reinforcement strategies
- Leave with an understanding of how to identify reinforcers for individuals on the autism spectrum
- Leave with an understanding of how to gradually reduce reinforcers

**Let's take a look at the autism
diagnosis**

A. Persistent deficits in social communication and social interaction across multiple contexts, not accounted for by general developmental delays, and manifest by all 3 of the following:

- Deficits in social-emotional reciprocity
- Deficits in nonverbal communicative behaviors used for social interaction
- Deficits in developing, maintaining, and understanding relationships

B. Restricted, repetitive patterns of behavior, interests, or activities as manifested by at least 2 of the following:

- Stereotyped or repetitive motor movements, use of objects, or speech
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior
- Highly restricted, fixated interests that are abnormal in intensity or focus
- Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment

“If you know one child with autism, you know one child with autism”

- Each individual with an ASD brings his/her own unique way of interacting with the environment
- Each individual brings his/her own reinforcement history
- Each individual with an ASD is more like his/her peers than different

**How do we
know what is
reinforcing?**

Motivation

Motivation

- Motivation makes us all different from one another.
- All born with unlearned motivators:
 - Hunger
 - Thirst
 - Removal of pain
 - warmth

Motivators

- Soon individuals develop motivators that are specific to them.
- In a young child it often begins with gaining attention.
- Some children may demonstrate a limited range of motivators, or atypical motivators.
- Motivators change constantly

Why is motivation important?

- Motivation is essential but sometimes challenging
- Often because individuals with autism have restricted repertoires of interest, it is difficult to maintain motivation

Individual's motivation

Motivation is influenced by:

- Learning history
- Expectations of success
- Environment

What steps can we take?

- Determine reinforcers
- Determine the skill level of each individual
- Determine antecedent events that evoke challenging behavior

So what is reinforcement?

Reinforcement

A stimulus change immediately follows a response and increases the future frequency of that type of behavior in similar conditions.

Positive Reinforcement

Positive reinforcement – when a response is followed immediately by the presentation of a stimulus, and as a result similar responses occur more frequently.

(Cooper and Heron, 2007)

Reinforcement

Most important and widely applied principle of behavior analysis.

Fundamental building block for the selection of operant behavior.

Reinforcement theory states that reinforced behavior will be repeated, and behavior that is not reinforced is less likely to be repeated

Example of Positive Reinforcement

Johnny eats his peas at dinner. His mother gives him a gummy bear. The next time Johnny has peas on his plate he eats all his peas.

(Cooper and Heron, 2007)

**If we have determined reinforcers
the next step is.....**

Pairing yourself with reinforcement

- In order to gain instructional control you have to be first established as the “giver” of all things good.
- This means that you deliver all reinforcement
- How do we arrange the environment to do this?

How do we pair ourselves with reinforcement?

- Initially you should hand out reinforcers for free
- Avoid using “go play” the the reinforcer for responding
- May want to put things up on high shelves meaning you do not want the child to get free access to the reinforcers.

WHY?

Now that we understand reinforcement and motivation.....

How do we determine those items that are reinforcing to the child?

Locating Motivators

- Preference Assessments
- Observe the child in their natural environment
- Use reinforcer surveys

Preference Assessments

- It is often difficult for individuals on the autism spectrum to effectively communicate preferences.
- Therefore it is important that as we allow them to indicate these preferences when possible.
- The best way is through preference assessments

Preference Assessments

- Preferences, like reinforcers can change with age, options, and satiation.
- Research has shown that increasing choice-making opportunities is associated with increases in appropriate behavior and decreases in inappropriate behavior.

(Snell and Brown, 2011)

Type of Preference Assessments

- Multiple Stimulus without removal (MSWO)

Multiple Stimulus without replacement

MSWO

- Directions
 - An array of items are collected and listed on the data sheet
 - The items may be placed on a large tray
 - Lay the items in a straight line on the tray
 - Instruct the student to “pick one”
 - Immediately after the selection, remove the remainder items to prevent multiple selections. Place a “1” by the item selected.
 - Do not replace the item the student selected. So the next round there will be one less item (instead of 7 items there will be 6)
 - Continue this process until the student does not select an item within 30 seconds.

Multiple Stimuli without Replacement (MSWO) Data Sheet

Child's Name: _____

Leisure/Food (Circle one)

Evaluator: _____

Date: _____

List of Items:

_____	_____	_____	_____
_____	_____	_____	_____

Preference Assessment #1	
Order of items selected	# times chosen/ # of times available
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Preference Assessment #2	
Order of items selected	# times chosen/ # times available
1.	
2.	
3.	
4.	
5.	
6.	
7.	

Reinforcer Survey

Child's Name: _____ Date: _____ Reporter's Name: _____

INSTRUCTIONS: Use a check mark to indicate the items or activities preferred

____ Music ____ Puzzles ____ Computer ____ Water play

List preferred music: ____ Outside play ____ Snack time ____ Free time

____ Playing with toys ____ Riding toys ____ Books, stories ____ Painting

List preferred toys: ____ Drawing ____ Painting ____ Visiting

____ Playing with pets ____ Cooking ____ Balloons ____ Making choices

____ Going for a walk ____ Job responsibilities ____ More independence ____ Special seat

____ Wearing jewelry ____ Wearing cosmetics ____ Being read to ____ Bubbles

____ List preferred materials:

____ Computer programs

Please list preferred:

____ Social activities:

Please list preferred:

____ Leisure activities

When developing reinforcement schedules in the community, home, or classroom....

Think about the reinforcement schedule

Schedule of reinforcement

When first teaching a new skill make sure the target response is on a continuous reinforcement schedule

Continuous schedules- every response contacts reinforcement.

This is needed when you first teach material and responses.

Schedule of reinforcement

- May move to a fixed schedule. Meaning after every 3rd response will contact reinforcement.
- Then gradually move to a variable ratio schedule. Meaning after a average number of responses the student is reinforced.

Things to consider....

If demands are difficult or something that is not in the child's current repertoire you may find that the response requirement may weaken the motivation

Response requirement weakens **Motivation**

Example, jumping on a trampoline may be fun, but requiring me to sit and comply with several demands may be too high and weaken jumping as a reinforcer.

Think of the number of demands you place on your child, client, or student.

Response requirements

- Examples of this in adults....

You may offer me \$500 to run a mile, and I will comply with the demand to run the mile.

Then you change the requirement and tell me I know have to run 25 miles for \$500.

This changes the value of that reinforcer!!!

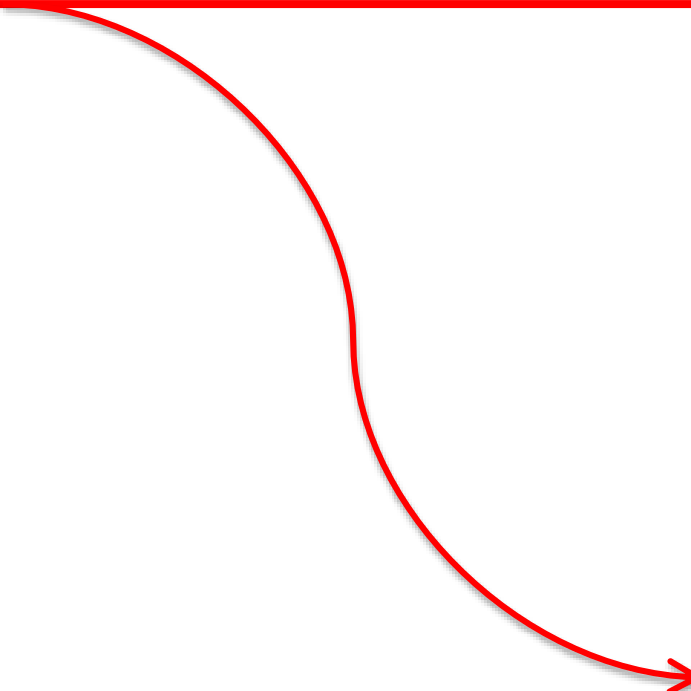
Immediately deliver reinforcement

- Several studies have demonstrated the need to deliver reinforcement immediately for behaviors that replace problem behaviors.
- The behavior will then be paired with reinforcement and will increase the likelihood that the behavior will occur again in the future.

How can we give choices and determine what is reinforcing in the moment?

“Choice boards empower children to participate actively in their home, school, and community environments.” (Savner, 1999)

Implementing a Choice Board

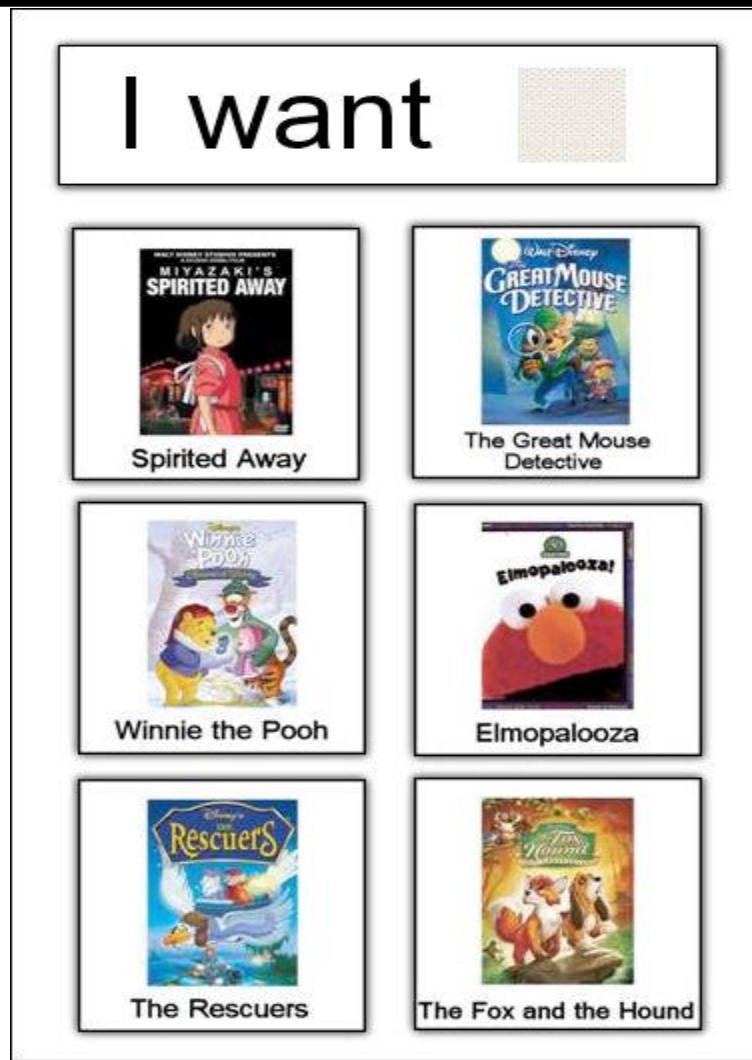


What are the skill prerequisites?

Steps for Implementing a Choice Board

1. Select an opportunity during the day when a student or child has choices
2. Create visual representations of the available choices using actual objects, drawings, photos, or icons
3. Present these visuals to the child and allow time for her/him to point to or pick up the desired object
 - ✓ Only present options that are available at that time
4. Acknowledge the child's choice by verbally labeling the choice ("You chose blocks")
5. Give the child the chosen item or allow her/him to get the item for herself/himself (James & Knowlton, 2007)





Token Systems

Token Systems

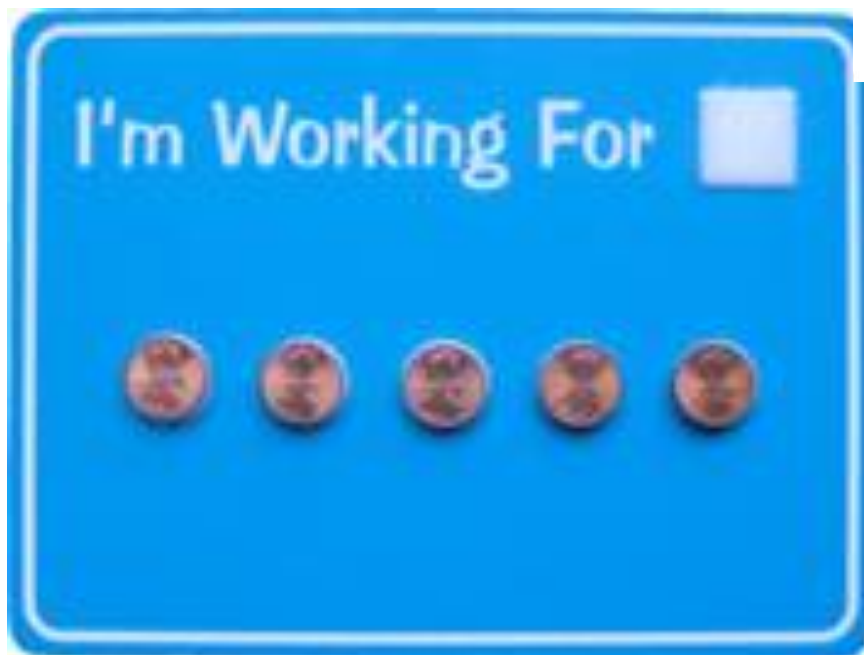
Behavior change system that is composed of three major components:

1. A specified list of target behaviors
2. Tokens or points that participants receive for emitting the targeted behaviors
3. Menu of backup reinforcers; preferred items, activities, or privileges the child can obtain when tokens are earned.

(Cooper and Heron, 2007)

Token Systems





Implementing a Token System

Depending on the skill level of the learner, the steps in implementing a token system may vary.

General steps include:

1. Describing how the system works
2. Model the procedure for token delivery
3. Model the delivery for token exchange

(Cooper and Heron, 2007)

Token Systems

First tokens should be given on a thin schedule of reinforcement.

Example:

Starting with one token required to contact reinforcement.
Then gradually fading in the amount of tokens, before reinforcement is contacted.
They receive reinforcement more quickly

Reinforcement Reminders

- Determine reinforcers that are motivating for the child
- Pair yourself with those reinforcers
- Remember to gradually fade reinforcement
- Allow the child to make choices of preferred items
- Remember it can not be called a reinforcer unless we look at its affect on the child's behavior

Thank you so much for coming!!

Questions??

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