



Using Reinforcement Effectively

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LASARD Project

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Participants will learn to:



- Identify effective reinforcers for their students
- Plan for a system of reinforcement
- Evaluate effectiveness of a reinforcement program





Louisiana Autism Quality Indicators (LAQI)



- I35. Systematic use of **reinforcement** is evident in the instruction provided
- I36. Plans for systematic use of **reinforcement** are evident.
- I52. Class wide student-specific behavior management systems target **positive consequences** rather than punitive measures.
- I52a. Individualized behavior management systems target **positive consequences** rather than punitive measures.
- I55. If present, Behavior Intervention Plans include procedures to **increase** replacement **behavior**.
- I56. Evidence of **identified student preferences** exists in lesson plans and IEP.
- I57. The **reinforcement** students are working for is identified before a student begins his/her work (i.e., students know what they are working for).

Reinforcement: Just the Facts!



- Relationship between a student's behavior (or response) and the consequence to that response.

A - B - C
Antecedent Behavior Consequence

- The consequence is considered reinforcement **only** if the response increases the likelihood that the behavior will occur in the future.

Neitzel (2009)

Reinforcement: Just the Facts!



- Reinforcement can be used to teach new skills or to increase the probability that a behavior will occur again.
- Reinforcement for individual students *will* vary.
- Only by measuring student responses/behavior- and seeing an increase- will you know whether or not what you are doing is reinforcement.

Neitzel (2009)

Reinforcement



Positive

Reinforcement

Presentation after target
behavior

Negative

Reinforcement

Removal after target
behavior



Increase in target behavior

Positive Reinforcement

- **Presentation** of a desired consequence following a behavior.



- **INCREASES** the behavior.



Alberto & Troutman (2009)



Steps to Implementing Positive Reinforcement



1. Identify the target skill/behavior
2. Collect baseline data
3. Establish goals
4. Identify reinforcers
5. Select schedule of reinforcement
6. Implement
7. Monitor progress

Adapted from Neitzel (2009)

Step 1: Identify target behavior

**What student
behavior would
you like to
increase?**

- Behavior
- Academic
- Social
- Communication

Step 1: Identify target behavior



- Use measurable and observable terms
 - Susan will stay seated during circle time.
- OR
 - Susan will stay seated in her designated area during circle time.
- OR
 - Susan will sit with her legs crossed in her designated square during circle time.



Is this target observable and measureable?



- Bob will greet others.
- Bob will greet a peer in the classroom by waving and saying “hi”.

Step 2: Collect baseline data



- How often is the student currently displaying the behavior?
- Collect data!
 - Frequency
 - Duration
- The only way to know if reinforcement is effective is to know if the behavior is *increasing*

Step 3: Establish goals and performance criteria



- Establish program goal
 - Bob will greet 2 peers by waving and saying “hi” when he enters the classroom.
- Establish performance criteria (3 is recommended)
 - Based on baseline data, the initial criteria should be easily achieved to establish connection between behavior and reinforcement.
 - ✦ Phase 1 – Bob will greet 1 peer by waving when he enters the classroom
 - ✦ Phase 2 – Bob will greet 1 peer by waving and saying “hi” when he enters the classroom
 - ✦ Phase 3 – Bob will greet 2 peers by waving and saying “hi” when he enters the classroom

Step 4: Identify reinforcers

3 Primary Types of Positive Reinforcement

- Tangible Reinforcers
- Social Reinforcers
- Activity Reinforcers



Neitzel (2009); Polloway, Patton, & Serna (2008)

Tangible reinforcement



- Food items 
- Age-appropriate toy or game 
- Preferred age-appropriate items such as access to an iPod.





- Verbal praise
- High 5s
- Spending time with a preferred person
- Hugs
- Smiles
- Hand shakes



Activity Reinforcers



- Selecting topic for group discussion
- Selecting a game or activity for recess
- Tutoring a classmate
- Reading to a friend
- Having extra time in a favorite subject
- Going out first to recess
- Taking attendance
- Handing out papers
- Helping to correct papers
- Being team captain
- Helping put up a bulletin board
- Getting an extra recess
- Reading comics, magazines
- Playing games
- Keeping their own behavioral point records



Why use Preference Assessments?



- Expressive language difficulties
- Increase desirable behavior
- Increase engagement using preferred items and activities





Identifying Reinforcers



Preference assessments are used to identify potential reinforcers for a particular student.

- Reinforcers can only be defined by the student.
- Reinforcers should be as natural as possible.
- Social rewards may not be reinforcing.
- Beware of satiation!

Informal Preference Assessment



- Observation
 - Free choice selections
- Family/staff interview/checklist
- Student interview/checklist

Vocabulary Selection Worksheet®

Student/Child:
Person completing form:
Date:

Instructions: List up to 5-10 items for each category. Include only those items that your student or child currently enjoys (or dislikes for final category).

Things your student/child likes to eat	
Things your student/child likes to drink	
Activities your student/child likes (watching television, spinning, sitting in a special chair, squeezes)	
Social games your student/child likes (Peek-a-boo, chase, tickles, etc.)	
Places your student/child likes to visit	
What your student/child chooses to do during free time	
People your student/child recognizes and enjoys being with	
Items, activities your student/child DOES NOT like	

Reinforcer Checklists/Menus



Jackpot! Create Classroom-Friendly Reinforcer Surveys On-Line

Reinforcer Survey

Directions: Review each of the items below with your student. For each item, mark whether the student finds it to be a preferred reinforcer or reward.

Bradford will read aloud to the class.
Doesn't like.....Does like

Bradford will play academic computer games.
Doesn't like.....Does like

Bradford will choose a story for the teacher to read to the class.
Doesn't like.....Does like

Bradford will help the teacher to prepare or present a lesson.
Doesn't like.....Does like

Bradford will help the library media specialist.
Doesn't like.....Does like

Reinforcer Checklist

Student: _____

Edible Reinforcers

Candy

1. Candy Cones
2. Candy Kisses
3. Chocolate
4. Gum
5. Hard Candy
6. Jelly Beans
7. Licorice
8. Lollipops
9. M & Ms
10. Now & Laters
11. _____

Cereal

1. Cheerios
2. Fruit Loops
3. Trix
4. _____

Fruit

1. Apples
2. Bananas
3. Oranges

Others

1. Cheese Balls
2. Cookies
3. Corn Chips
4. Crackers
5. Cup cakes
6. Doritos
7. Frosting
8. Peanuts
9. Popcorn
10. Pretzels
11. _____

Material Reinforcers

1. Balloons
2. Balls
3. Beads
4. Bean bags
5. Blocks
6. Books
7. Bubbles
8. Colored chalk
9. Coloring books



Systematic Preference Assessments

- Single Stimulus Preference Assessment
- Multiple Stimuli Without Replacement
- Paired Choice Assessment

Neitzel, 2009; Deleon & Iwata, 2004; Alberto & Troutman, 2009

For more
information, please
see the
Autism Training
Module: Behavior



- One item is presented at a time.

**Single Stimulus Preference Assessment
Reinforcer Worksheet**

Student Name: Paul Student Age: 12 Evaluator: Session 1 JR
 Session 2 LA
 Session 3 BP

Item	Rejects			No Reaction			Reaches for			Protest when taken away			Shows signs of pleasure			Takes Again		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
	date	date	date	date	date	date	date	date	date	date	date	date	date	date	date	date	date	date
iPod							X			X			X			X		
lanyard				X														
chap stick							X						X					
comic book							X						X					
eraser				X														

Multiple Stimulus without Replacement



- All items presented simultaneously
- After an item is chosen, it is removed from the selections
- Remaining items are rearranged
- Repeated until all items have been chosen or student does not interaction with remaining items

Paired Choice Preference Assessment

Student Name: Paul

Assessment Date: 10/26/09

Person Assessing: Ms. Robinson

A = Smile and “great job”*

B = Book

C = High five*

D = iPod

E = Connect 4

F = Sunglasses

	A	B	C	D	E	F
A	x	x	X	X	x	x
B	A	x	X	X	x	x
C	C	C	X	X	x	x
D	D	D	D	X	x	x
E	A	E	C	D	x	x
F	A	F	C	D	F	x

(*these items were presented to Paul through a photo representation)

#1 Preference iPod

#2 Preference High five

#3 Preference Smile and “great job”

Based on Fisher et al., 1992

Step 5: Determine Schedule of Reinforcement



- **Continuous schedule**
- **Intermittent schedule**
 - **Fixed schedule**
 - **Variable schedule**



Alberto & Troutman (2006); Neitzel (2009)

Continuous Schedule



- Reinforcement occurs after EVERY occurrence of desired behavior
- Develops clear association between behavior and reinforcement
- Best for learning a new skill/behavior



Neitzel (2009);
Downing (2010)

Intermittent Schedule



- Reinforcement occurs after some occurrences of the target skill/behavior, but not each and every time.
 - Fixed schedule – Reinforcement delivered after a specific number of occurrences
 - Variable schedule – Reinforcement delivery is based on an average number of occurrences
- Maintain and strengthen desired behaviors



Neitzel (2009);
Downing (2010)



Example of Positive Reinforcement

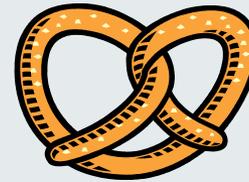


- Teacher: 3×3 is...
- Joe: 9
- Teacher: Right! (Tally check where Joe can see)
- Teacher: 5×5 is...
- Joe: 25
- Teacher: Right! (Tally check where Joe can see)
- Teacher: 10×10 is...
- Joe: 100
- Teacher: Right! (Tally check where Joe can see)
- Teacher: Joe, you got 3/3 correct (pointing to checks).
You can be first in line for recess!

Prevent Satiation!



- Reinforcers become less effective when used too frequently
- Use menu
- Use edible reinforcers sparingly
- Pair primary reinforcers with secondary reinforcers



Neitzel (2009)

Step 6: Implement



- Share positive reinforcement plan with all individuals involved with a student
- Especially at the beginning, consistency is key!



Neitzel (2009)

Step 7: Monitor learner progress



- Collect data to determine if reinforcement is effective
- If goals being met, reinforcement can be ***gradually*** reduced to promote generalization and maintenance
- Move from continuous schedule to intermittent schedule.

If behavior is not increasing:



- Is the targeted behavior well-defined? Observable and measureable?
- Are there too many reinforcers?
- Are there too few reinforcers?
- Are the reinforcers motivating to the student?
- Are all staff using reinforcement in a consistent manner?
- Is reinforcement occurring at a sufficient level to maintain the behavior?

Neitzel (2009)



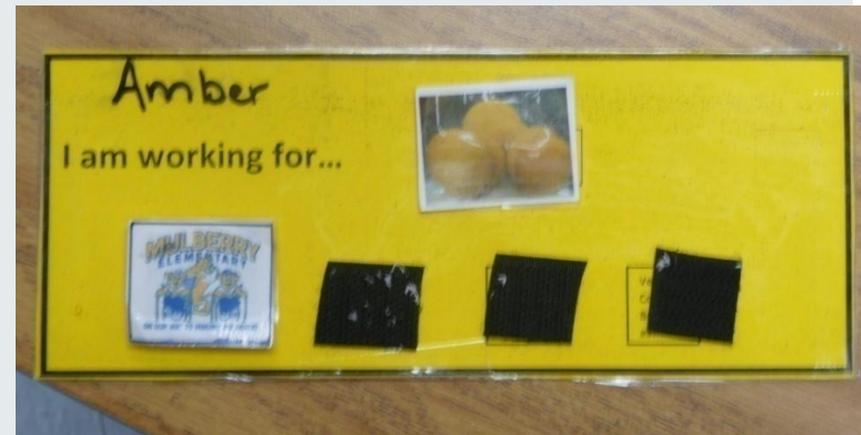
Other Applications of Reinforcement



- Use of choice
- Materials of interests
- Token systems



- Maintain a number of potentially reinforcing items/available activities
- Give student choice following any given activity/task/work period



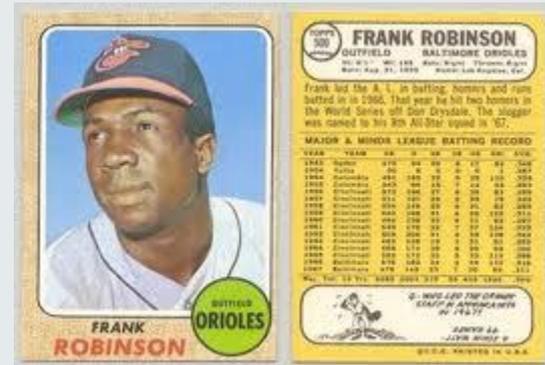
Downing (2010)



- Students with disabilities maintained learned skills more when materials were interest based
- Weave interests into math problems, stories being read, and other content
- Do not replace core curriculum, but add to what is being learned to make it more relevant



- A student has an intense interest in baseball cards. How could this interest be used in:
 - Math
 - History
 - ELA
 - Science



Example adapted from Downing (2010)

Token Economy Systems



- Follow same steps to identify target behavior and reinforcers
- Plan program:
 - Identify tokens
 - Set up a system
- Implement:
 - Clearly describe system to learner
- Monitor progress

For more information, please see the NPDC on ASD Steps for Implementation: Token Economy Programs



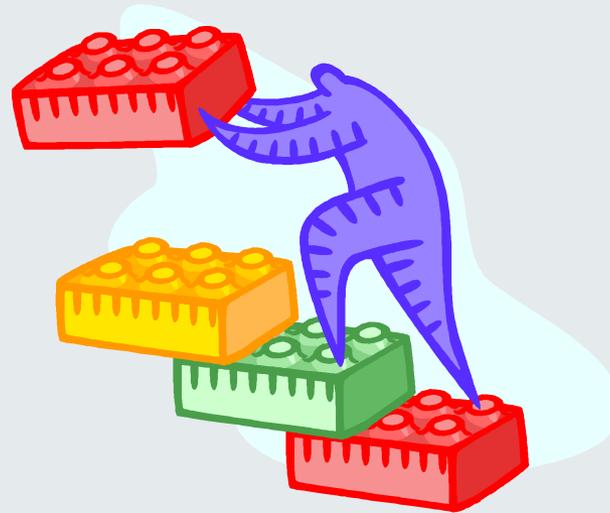


- Principles of reinforcement
- Steps to implementing positive reinforcement program:
 1. Identify the target skill/behavior
 2. Collect baseline data
 3. Establish goals
 4. Identify reinforcers
 5. Select schedule of reinforcement
 6. Implement
 7. Monitor progress
- Other applications of reinforcement

Adapted from Neitzel (2009)



- What step will you take to implement a positive reinforcement program?







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- LASARD Autism Training Modules
 - www.laqitm.org
- National Professional Development Center on ASD
 - <http://autismpdc.fpg.unc.edu/>

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