Using Preference Assessments & Pairing to Motivate Early Learners in a School or Preschool Setting

Julie Eshleman, M.Ed., BCBA
Chiara Cunningham, M.S., BCBA
Dana Zavatkay, PhD, BCBA-D, NCSP
Georgia Association for Positive Behavior Support

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• Many recommendations made by behavior analysts tie back to the 3-term unit of learning
  – A-B-C

• Antecedent
  – Stimulus change happens (instruction is given)

• Behavior
  – Student complies (or doesn’t) with instruction

• Consequence
  – Not always bad!
  – Whatever happens right after the behavior occurs
Changing the ABC unit

• When you can identify surrounding events (the things that consistently occur before or after a behavior), you can make changes to adjust the frequency or intensity of a behavior
  – Applies to learning/skill acquisition responses
  – Applies to replacement behaviors
  – Applies to communication behaviors
    • Verbal communication
    • Using ASL
    • PECS
    • Vocal Output Device…
ABC Unit Changes

• Antecedent Strategies
  – Often proactive changes that can be made to optimize learning and appropriate behaviors
  – In environment, learning materials, interactions…

• Behaviors
  – Skill acquisition/learning behaviors
  – Appropriate, prosocial (replacement) behaviors

• Consequences
  – Increase responses we like!
  – Decrease responses that are less functional for the learner and teachers
Before teaching begins...

• Antecedent strategies are a great place to start to optimize the learning environment
  – Change setting events for desirable OR undesirable behaviors
  – Establish motivation through materials and activities
  – Physical arrangement of classrooms or learning areas
  – Daily schedule/routine structure
  – Transitioning supports...

• Today, we will focus on a very powerful strategy to use AFTER behaviors happen to maximize learning
Children with Autism Spectrum Disorders

- “One of the most challenging aspects of attempting to teach a child with a diagnosis of autism spectrum disorder involves getting them to actively participate in learning activities for a sufficient amount of time to be able to acquire the skills that are being taught” (Sterling, et al., 1997).
So how can we create active learners?

• Make Learning FUN!

• By establishing effective reinforcers, we can change the consequences following desirable behaviors to teach children how valuable those responses are!
Clearing up Consequences

• Consequences get a bad rap!
  – Associated with punishments like time out, loss of privileges, scolding…
  – Those are not helpful in motivating learners to engage in the correct learning responses

• Consequences can be GREAT!
  – A stimulus that is presented right after a behavior that increases the future frequency of that behavior occurring is considered a ‘reinforcer’
  – Using reinforcers correctly is a VERY effective communication tool for teachers to show children what valuable behaviors they want to see again
Reinforcement as a Consequence

- Reinforcement is a process in which there is:
  1. a change in the environment (typically a stimulus added)
  2. that follows a certain behavior (one we want to see again)
  3. results in an increased probability that the specific behavior will **occur more often** in the future under similar circumstances

- The environmental change that occurs following the behavior and increases the future probability of that behavior is called a **reinforcer**

  

- **Partington (2008)**
Some Types of Reinforcers

• **Untrained/Primary Reinforcers**
  - Edible items
  - Leisure items (toys, etc)
  - Sensory stimulation (touch, smells, sounds)

• **Conditioned Reinforcers**
  - Praise
  - Thumbs up

• **Escape Motivated Reinforcers**
  - Ending a non-preferred task
  - Terminating an unpleasant situation
Finding Reinforcers

- Reinforcers have to be identified for each child
- Some children might be motivated by similar or the same things, but some aren’t!
- Have to systematically identify items that could serve as potential reinforcers for each individual child in order to effectively change behaviors
Preference Assessments!

• Identify potential reinforcers
  – Increases learning and makes instructional time more efficient

• Preferred items can potentially serve as effective reinforcers to motivate learners
  – The “paycheck” for working hard!

• You know that an identified preferred item serves as a reinforcer when the behavior you deliver it immediately after INCREASES!
  – Skill acquisition responses
  – Replacement behaviors
Why Conduct Preference Assessments?

• Gives instructor the opportunity to identify reinforcers and pair themselves with those items
  – Helps the teacher become a conditioned reinforcer
  – Allows teacher to use instructional time more efficiently because child learns s/he will get access to preferred items/activities while working with this person
Why Conduct Preference Assessments? Cont

• Makes learning fun!
  – Much more motivating to work with someone who ‘gives you a paycheck’ than with someone who is coercive!
  – Child learns “when I work with this teacher, s/he is going to give me lots of access to the stuff I like!”

• Creates a Willing Learner
  – We want to ensure that our interactions with a child result in them wanting to interact with us!
  – We want the child “running to us” rather than “running from us”
Ways to Conduct Preference Assessments

• Caregiver interviews
  – Familiar people can give clues as to what children like
  – The Reinforcer Assessment for Individuals with Severe Disabilities (RAISD) (Fisher et al., 1996)

• Single stimulus selection methods
  – Present one item at a time and record what items the student engages with

• Multiple stimulus selection methods
  – Present multiple items multiple times and identify a pattern in the repeated choices (if any)
Stimulus Selection Preference Assessments

- **MS** – Multiple Stimulus
- Paired Choice/Paired Stimulus
- **MSWO**– Multiple Stimulus Without Replacement
- Free Operant
MS - Multiple Stimulus

• Present 6-7 potentially preferred items and record what items are approached most often

• After child chooses an item to consume or engage with, all items are removed, rearranged and then re-presented

• All stimuli are available in each trial, and you do as many trials as there are items

• Can separate edibles and leisure items
Paired Choice (Paired Stimulus)

• Present 2 potentially preferred items at a time and record what item is selected

• When the child chooses, allow him/her to consume, remove other item, then present the next pair

• Present all items in all positions (on the right and on the left) and against all other items

• Calculate preference: # of times the item was selected/# of times item was presented = % selected

https://www.youtube.com/watch?v=tXY4VFMi0KI
I. Potential Reinforcers List
Item 1:

Item 2:

Item 3:

Item 4:

Item 5:

Item 6:

II. Pairing of Reinforcer Choices
Trial Set 1: First item presented on student's right
<table>
<thead>
<tr>
<th>Pairing of items</th>
<th>Student Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 3 &amp; Item 6</td>
<td>3...6...No Choice</td>
</tr>
<tr>
<td>Item 2 &amp; Item 4</td>
<td>2...4...No Choice</td>
</tr>
<tr>
<td>Item 4 &amp; Item 5</td>
<td>4...6...No Choice</td>
</tr>
<tr>
<td>Item 1 &amp; Item 3</td>
<td>1...3...No Choice</td>
</tr>
<tr>
<td>Item 2 &amp; Item 5</td>
<td>2...5...No Choice</td>
</tr>
<tr>
<td>Item 3 &amp; Item 4</td>
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<tr>
<td>Item 2 &amp; Item 3</td>
<td>2...3...No Choice</td>
</tr>
<tr>
<td>Item 1 &amp; Item 2</td>
<td>1...2...No Choice</td>
</tr>
<tr>
<td>Item 5 &amp; Item 6</td>
<td>5...6...No Choice</td>
</tr>
<tr>
<td>Item 3 &amp; Item 5</td>
<td>3...5...No Choice</td>
</tr>
<tr>
<td>Item 1 &amp; Item 4</td>
<td>1...4...No Choice</td>
</tr>
</tbody>
</table>

(Optional)
Trial Set 2: First item presented on student's left
<table>
<thead>
<tr>
<th>Pairing of items</th>
<th>Student Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 2 &amp; Item 6</td>
<td>2...6...No Choice</td>
</tr>
<tr>
<td>Item 4 &amp; Item 5</td>
<td>4...5...No Choice</td>
</tr>
<tr>
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<td>1...4...No Choice</td>
</tr>
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</tr>
</tbody>
</table>
MSWO – Multiple Stimulus Without Replacement

- Set out 6-7 potentially preferred items all at once and record what item is selected

- After child chooses an item to consume or engage with, remaining items are removed, rearranged and then re-presented (item selected in first presentation is not replaced)

- Continue presenting until all items have been selected OR indicating responses cease

- Can separate edibles and leisure items
Data Sheet Example - MSWO

List of Items:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</table>

<table>
<thead>
<tr>
<th>Preference Assessment #1</th>
<th>Preference Assessment #2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Order of items selected</strong></td>
<td><strong>Order of items selected</strong></td>
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<tr>
<td>1.</td>
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<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<td>5.</td>
<td>5.</td>
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<tr>
<td>6.</td>
<td>6.</td>
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<tr>
<td>7.</td>
<td>7.</td>
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</tbody>
</table>

# times chosen/# of times available

https://www.youtube.com/watch?v=4hRet6DcJ10
Free Operant Assessment

• Allow free access to a variety of stimuli or preferred items in the environment
  – Duration of engagement with each item is recorded as an index of relative preference

• Provides quick, easy evaluation of preference without removal or withholding of preferred items or the presentation of specific selection opportunities that might be perceived as demands

https://www.youtube.com/watch?v=rlA--q64SA8

Sautter (2008)
<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>Pros:</th>
<th>Cons:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Stimulus</td>
<td>• Can be conducted quickly</td>
<td>• Can underestimate reinforcer value of items when preferred items are always available</td>
</tr>
<tr>
<td></td>
<td>• Good for frequently shifting preferences</td>
<td></td>
</tr>
<tr>
<td>Paired Choice</td>
<td>• Most consistent results</td>
<td>• Time consuming</td>
</tr>
<tr>
<td></td>
<td>• Provides the most information</td>
<td>• Requires high number of trials</td>
</tr>
<tr>
<td></td>
<td>• Gives item by item comparison</td>
<td></td>
</tr>
<tr>
<td>MSWO</td>
<td>• Can be conducted quickly and frequently</td>
<td>• Takes slightly longer than MS to administer as children take longer to select when given less preferred item choices</td>
</tr>
<tr>
<td></td>
<td>• Requires child to select between less preferred items</td>
<td>• Requires scanning repertoire</td>
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<tr>
<td></td>
<td>• Provides hierarchy of preferences</td>
<td></td>
</tr>
<tr>
<td>Free Operant</td>
<td>• Can be used with children that do not have scanning repertoires</td>
<td>• Does not yield as much information as other assessments</td>
</tr>
<tr>
<td></td>
<td>• Great to use with children with significant problem behaviors (no items are removed)</td>
<td></td>
</tr>
</tbody>
</table>
What To Do Next

• Pick the top few items (both edibles & leisure items)
  – Keep these items readily available for that child

• Present identified items immediately following desirable behaviors
  – Not only for learning responses, but also for appropriate behaviors, and the omission/absence of problem behaviors

• Decide if it is working
  – Are the learning responses/appropriate behaviors increasing?
    • If yes, you found a reinforcer
    • If no, then problem solve!
Things to Consider

• Separate edible items from leisure items into 2 assessments for stronger results

• The child should be familiar with all items prior to the assessment (removes question of novelty)

• After edible assessments, cut up the food into tiny bites to limit amount of food delivered/cost/calorie consumption/etc.

• Consider using a timer when delivering leisure items, especially electronics, to limit amount of time spent
Things to Consider (Continued)

• Does the child have a side bias?
  – If yes, then be aware of the limitations of your results

• Does the child have a scanning repertoire?
  – If yes, then conduct an MS or MSWO assessment to save time
  – If no, then try conducting a PS or Free Operant assessment

• Does the child only respond to ‘primary’ (consumable) reinforcers?
  – Always deliver edibles with praise and other social reinforcers to develop value for them
What If the Item Isn’t Working as a Reinforcer?

• Could the child be satiated on the reinforcer?
  – Maybe you need to vary the reinforcers more often
  – If the child is consuming a lot of edibles, maybe they are thirsty!
  – Did they just eat lunch? If so, food may be less powerful
  – Be sure to limit access to the item outside of teaching sessions to maintain their value

• What about your schedule of reinforcement?
  – Are you delivering the right reinforcer but on too lean of a schedule?
Some Uses for Reinforcers

• Helps you teach what behaviors are more valuable through use of differential reinforcement
  – Higher quality skill acquisition responses vs. lower quality
  – Shaping closer approximations to words or other complex responses
  – Making functionally equivalent replacement behaviors more valuable to the learner than less desirable behaviors
Differential Reinforcement - DRO

• DRO Schedules
  – Involves setting a duration of time during which the child can refrain from engaging in problem behavior and delivering a reinforcer following that interval
  – Used to decrease the rate of inappropriate behaviors by providing reinforcement for a time period without problem behaviors
  – Giving reinforcers for the ‘absence’ or omission of problem behaviors (which means you are reinforcing all behaviors that were NOT problem behaviors!)
Differential Reinforcement - DRA

- **DRA Schedules**
  - Used to increase the frequency of a replacement or alternative behavior to simultaneously decrease some form of problem behavior
  - Increase an appropriate replacement response (often a communication response)
  - Any problem behaviors should decrease as they become unnecessary or less effective to the learner for accessing reinforcement
References


References


Questions? Contact us!

Julie Eshleman, M. Ed., BCBA
Julie.Eshleman@choa.org

Chiara Cunningham, M.S., BCBA
Chiara.Cunningham@choa.org