Don't save it all for the CABs!:

How to assess, identify, and teach relevant skills within HRE

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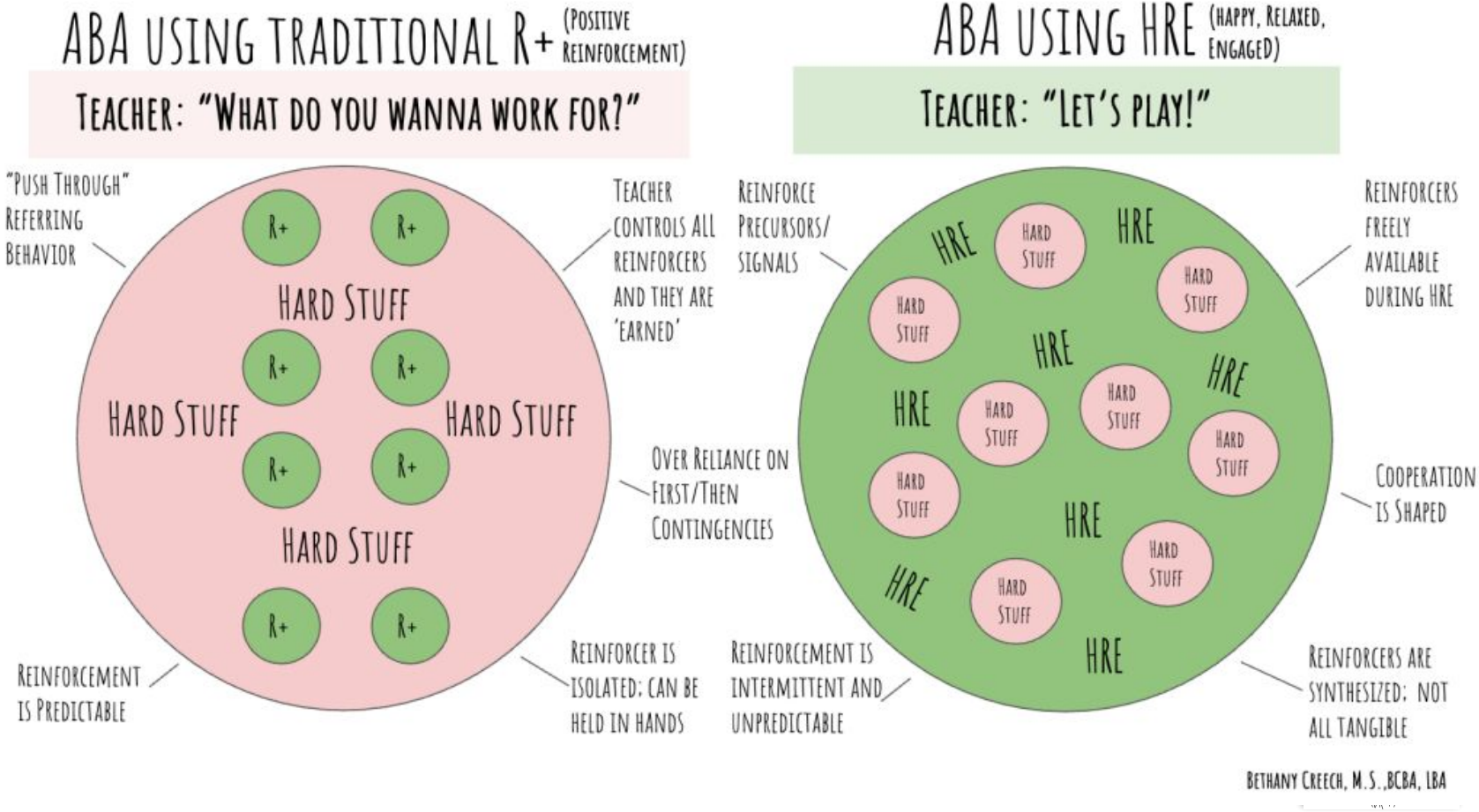
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Webinar Objectives

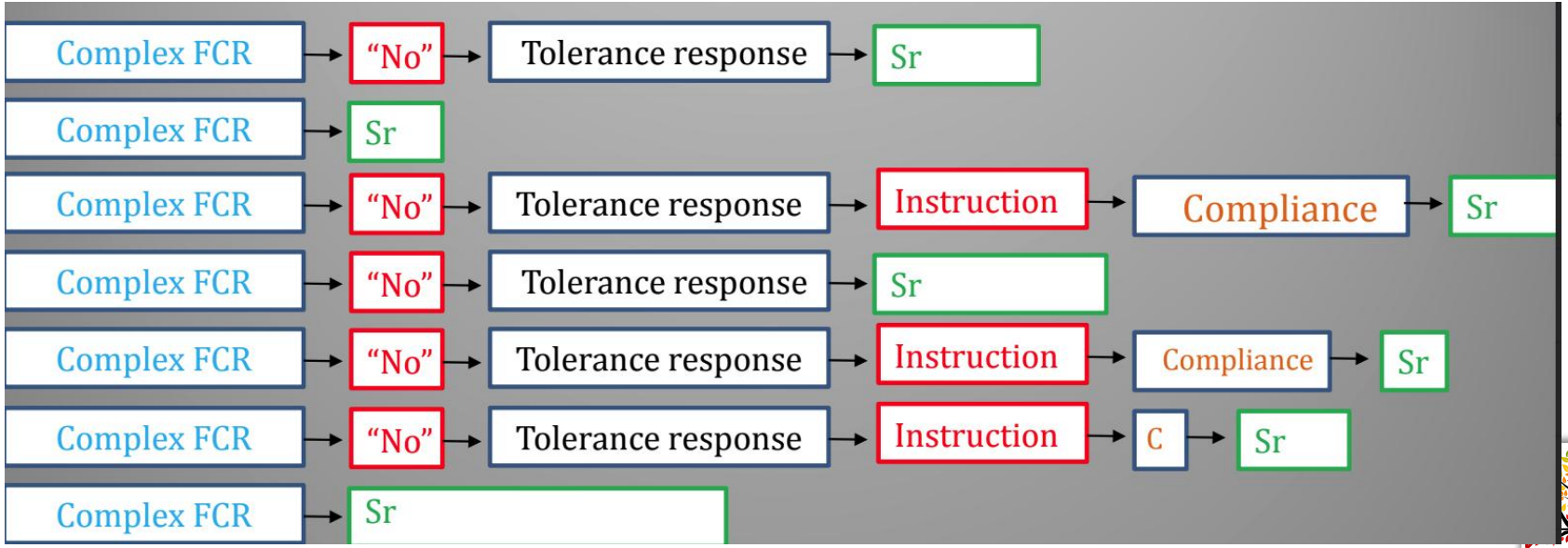
1. Describe the importance and utility of setting learning goals within the reinforcement condition of SBT.
2. Identify and operationally define learning goals within the reinforcement condition of SBT.
3. Identify methods to assess for skills that can be taught or strengthened within the reinforcement condition of SBT.
4. Identify specific activities and interventions that can be used within SBT, customized to a specific learner to both match their HRE components while teaching new skills embedded in those components.

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Why HRE?


ABA USING TRADITIONAL R+ (POSITIVE REINFORCEMENT)
TEACHER: "WHAT DO YOU WANNA WORK FOR?"
"PUSH THROUGH" REFERRING BEHAVIOR
TEACHER CONTROLS ALL REINFORCERS AND THEY ARE 'EARNED'
OVER RELIANCE ON FIRST/THEN CONTINGENCIES
REINFORCEMENT IS PREDICTABLE
REINFORCER IS ISOLATED; CAN BE HELD IN HANDS
R+
HARD STUFF
ABA USING HRE (HAPPY, RELAXED, ENGAGED)
TEACHER: "LET'S PLAY!"
REINFORCE PRECURSORS/ SIGNALS
REINFORCERS FREELY AVAILABLE DURING HRE
COOPERATION IS SHAPED
REINFORCEMENT IS INTERMITTENT AND UNPREDICTABLE
REINFORCERS ARE SYNTHESIZED; NOT ALL TANGIBLE
HRE
HARD STUFF
BETHANY CREECH, M.S., BCBA, LBA

Linear nature of SBT trials



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Non-linear nature of trials within HRE

- Captured
- Contrived
- Contrive context, then capture opportunity



Why Goals within HRE

1. Some learners come to us without HRE contexts.
2. Some learners need a lot of time to learn the FCR.
3. Some learners need a lot of time between trials.
4. Some days are just “CAB2 kind of days”.
5. Develop some instructional control within SR before introducing the CABs (can often practice elements of the CABs first)

This can feel stressful, like “we are just wasting time” and also we can all feel pressure from our funders!.

- So much can be taught and tracked without delivering an EO.

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Basic Tips for Goals During HRE

- SAFETY IS PRIORITY. Do not attempt goals that are too hot for learner! HRE goals should ideally not lead to R1s.
- Avoid EOs….it should not feel like a demand.
- Avoid physical prompting unless invited.
  - Model, gesture, expectant pause. OK to do the skill yourself
- Go slow.
- Initially goals should be about what staff does
  - Not so much about what the learner does.
- Secret get out Jail free card if things go sideways.
  - My Way!!!!!!!

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Profiles

Profile 1

low -to-no vocal verbal skills

High rate of stereotypy

Limited play ideas

Tends to “guard” items

Creates and defends “shrines” (e.g. laying out parts of a set in a certain visual array but not as part of another idea)

Profile 2

Medium-to-high vocal verbal skills

Stereotypy tends to be part of play rather than the main activity

Varied imaginative ideas

Shares toys and play with others

Set arrangements tend to be related to another idea (e.g. setting up scene from movie)

Tend to have a history of EOs/adult demands/behavior systems that went awry

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Learning Goal: Expanding HRE

- Expanding HRE: Developing and increasing the quality, dimension, breadth and/or interactiveness of current HRE repertoires
- Why? Often leads to more robust HRE, less satiation and more social reciprocity.
- When to consider:
  - Learners with limited play repertoires.
  - Learners with rigid play repertoires
  - Learners who can’t seem to get to full HRE.



Learning Goal: Expanding HRE

Tips for Expanding HRE

- Ask parents for previous interests.
- Go slow. MICROSHAPE
  - The first step might be setting an expansion toy on the table but not touching it or even looking at it.
- Look for signs of distress and immediately put back the toy. Let the learner know they are still in charge but another way is possible.

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Examples: Expanding HRE within a single activity

Scenario with profile 1 E

Learner takes a big bin of plastic animals and an empty container, takes out one animal at a time and labels it, then drops it into the other container.

- Add water soap/bubbles/dye to the second container
- Add small container to pick up animals (scoop, measuring cup, large spoon)
- Add a method for the animals to get to the container (”diving board”, vehicle, road)
- Slide animals down slide/chute/mailing tube

Scenario profile 2 T

Learner only will play one game called caterpillar attack where all the blocks are caterpillars and the dinosaur puppet eats them.

- Add “worm” blocks. (start with one different block
- Add a shark puppet. If this is too big give the dino a hat.
- Maybe the dinosaur suddenly becomes allergic to caterpillars.
- Add in some “real” food and have the dinosaur spit them out in disgust between eating worm blocks

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Examples: Expanding HRE to related second activity

Scenario with profile 1

Bin of little characters

Sets (e.g. big bin of different colored rubber animals)

Themed sets (ocean animals, bugs, etc.)

Two sets mixed up with two bins to put them into for sorting as you play (e.g. ocean animals and bugs. Ocean animals get a blue container, bugs get a green flat tray).

Scenario profile 2

The dinosaur puppet has to visit the doctor after eating the caterpillar

- Now there are doctors and medicine.

The worms find a portal to another dimension. (build in other interests here).

The dinosaur is tired of eating at home and finds an insect restaurant to go to where it can order caterpillars

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Sample Goals: Expanding HRE

Profile 1:

When adults participate in the HRE routine, the learner will accept the adult varying at least 3 dimensions of the play and communicate to adjust those, and then mand for the adult to do that. Example with puzzle pieces.

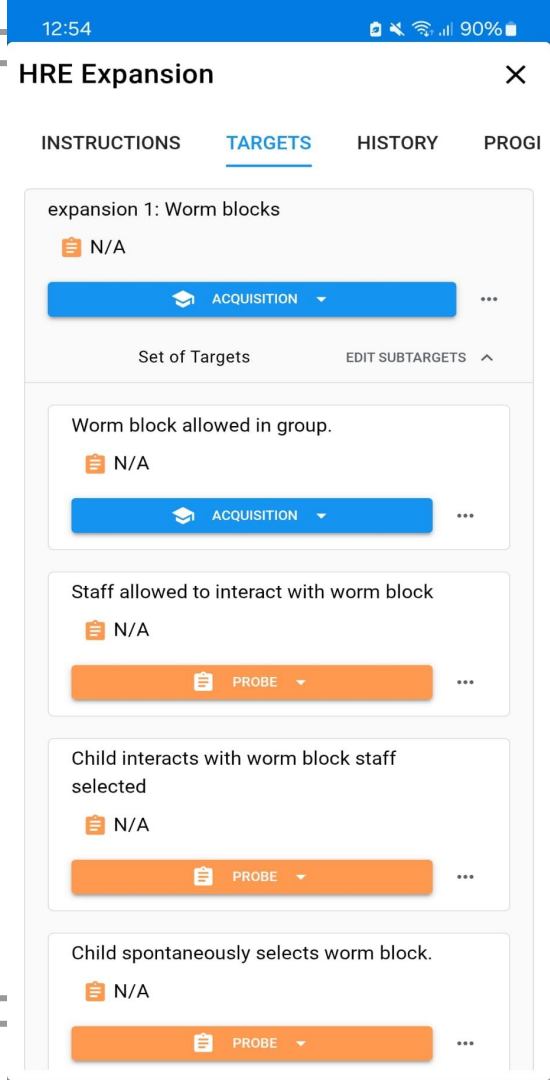
Profile 2.

- Sample goal: Learner will incorporate a teacher suggested toy into an established play routine for 4 out of 5 opportunities across 3 sessions
- Learner will incorporate a teacher suggested activity into an established play routine for 4 out 5 opportunities..

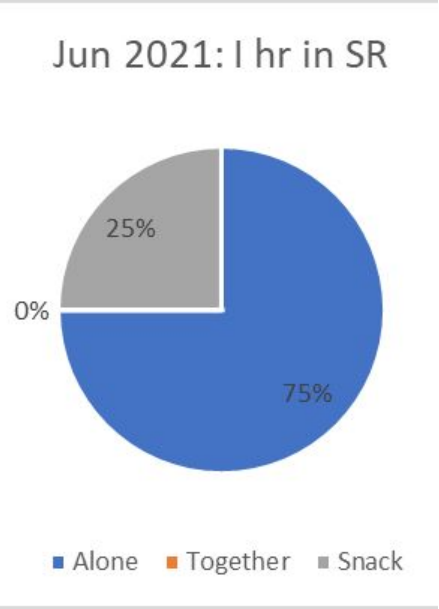
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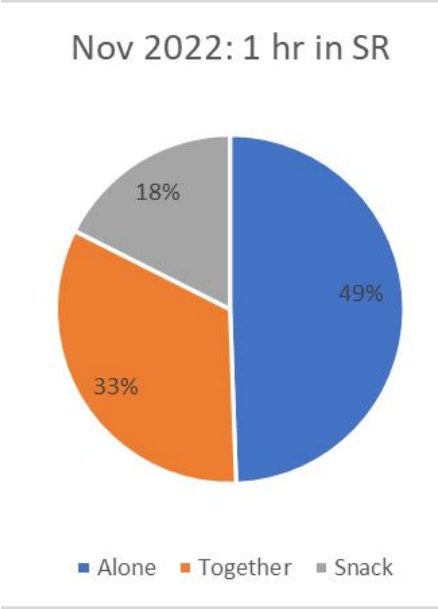
Documentation and Data: Expanding HRE

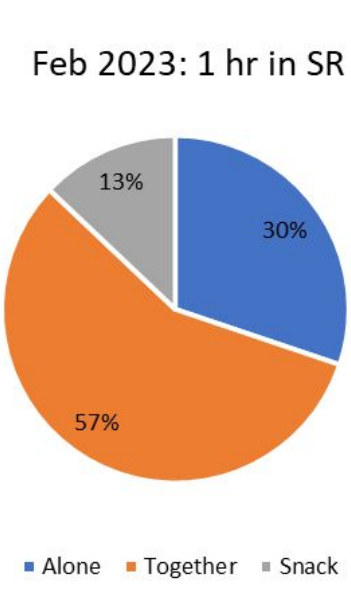
- Set of targets for accepting new toys, activities.
- Free Operant Preference Assessment
  - Minutes of engagement
  - Take Baseline data.

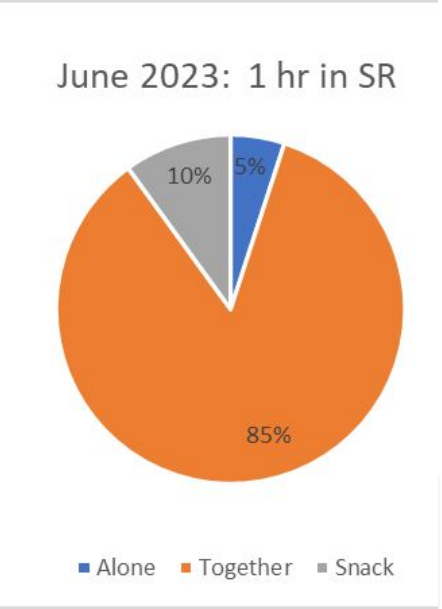


Free Operant Preference Assessment Results









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Learning Goal: Joint engagement and parallel play

- Tolerate someone doing something else in the same space.

When to consider?

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Examples: Joint Engagement and Parallel Play

Scenarios with profile 1

Learner sits on their bed with an ipad and stuffies, arranging them to match the video. Adult sits on the floor with a matching lotto card set.

Adult works on their lotto card set. As they go, they move closer to the learner and eventually do a few sets on the bed, then prepare a couple of sets and place the matching items near the learner to make it really easy to join in.

If that's looking good, they might ask the learner directly to help them find the ____.

Scenario profile 2

Learner is on the couch reading Dogman comics. Adult sits in the armchair with some knitting. As the learner is comfortable, adult talks quietly to themselves about their project. Then adult asks learner to share when they laugh about something in their book. Adult asks a simple factual question about the books, "e.g. is that the same author as Captain Underpants?"

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Goals: Joint Engagement and Parallel Play

Goals 1:

When another adult enters the learner's space while the learner is demonstrating signs of strong HRE, the learner will continue to remain in the learning area, and continue to demonstrate consistent HRE while the adult engages in a separate leisure activity.

When the adult presents communication opportunities within social responding behavior chains, the learner will respond to at least 50% of opportunities to cause the chain to continue using a variety of communication forms.

goals profile 2

The learner will engage in parallel play with a larger shared set of materials, demonstrating signs of strong HRE while each person enacts their own play ideas.

Learner will engage in associative play with an adult, each playing their own idea, where the learner responds to the adult's communication bids (e.g. offering a necessary item, asking the learner to pass over a piece they aren't using, etc.)

Learner will respond to covert communication bids following a model from an adult and a presentation of the materials or learning context that allows the learner to respond by beginning to engage.

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Documentation and Data: Joint engagement and Parallel Play

Toy name Is it novel or familiar? N/F	Learner stays when adult enters space with activity -	Learner continues current activity while: adult parallel plays with activity	Learner observes adult playing with toy	Learner accepts covert bid to join	Learner accepts overt bid to join	Learner continues to engage in toy beyond initial response	Learner engages in more complex engagement with toy - Associative play	Learner engages with toy when left out in free operant arrangement	Learner engages in different ways to play with toy than modeled by staff

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Documentation and Data: Joint engagement and Parallel Play

STEAM Tracking using a BARS chart (for staff training)

Client Name: _____ Date: _____ Staff Initials: _____

Directions: At the end of each activity, measure the steam of the activity for each dimension using the chart below. Rate each dimension at a 1-3 depending on which was applicable for the majority of the activity. The goal of this is to recognize where the learner is and for the instructor to make changes or adjustments to the activity so that learner gets to a 3 across as many dimensions for as much of the activity as possible. When this does not occur, the goal would be to increase the levels through careful in-the-moment analysis of the teaching context and respond to any drops in steam by making changes so that the steam levels rise again.

Activity:	Steam level (1-3)	Notes for next time
Necessity of prompts		
Inter-response time (IRT)		
Latency		
Magnitude of Response		
Affect		
Necessity of extrinsic reinforcers		

Latency

- More than 30 seconds after presentation of SD
- During latency gap, may begin another response to something more salient in environment

ications.

- 5-30 seconds after presentation of Sd
- Often distracted after presentation of SD and requires re-presentation before shorter latency

the activity

- Less than 5 seconds after presentation of Sd

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Documentation and Data: Joint engagement and Parallel Play

	Rating 0-3 (MTS)				Frequency				Rating Scale (1-5)	Y/N	Describe	Notes
Time	H	R	E	Tota l	R2	R1	Phys appro ach To staff	Communi cation bids to staff	Closest proximity to client	Tacts during activity	Indicators of highest HRE this interval	
2:45	3	2	3	8	Y	N	1 1	///	4	Y	Vocal mands, laughing, trying to chase BCBA with water balloon	Able to expand and try variations of play with multiple items.

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Learning Goal: Teaching communication

When to consider?

- Learner has little or no functional communication.
- Learner has little or no preverbal communication skills.
- Learner is passive and waits for other's to initiate interactions.

Teaching communication (signs or pictures):

- POWR intervention (Douglas & Gerde, 2019)
  - Prepare (set the stage, follow motivation and interest)
  - Offer opportunities for communication (simple, clear situations)
  - Wait for communication attempt (5-7 seconds)
  - Respond. To. Any. Communication. Attempt.
    - This is where BCBAs can shine—SHAPING!

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Sample data: shaping the mand

	Sample behaviors in class
Class 1	Leans closer, look at _____, does not withdraw assent when item presented, accesses item, orients towards, smiles
Class 2	Takes from adult when presented, reaches for item when held out/up, vocalizes, physical approach
Class 3	References adult and item, reaches but does not grab, vocalizes WITH orienting towards adult, vocalizes with gesture, references adult with reach
Class 4	Points, holds out hand/s, demonstrates attending response, holds out container or presents other item to go with activity/item
Class 5	Signs, uses AAC, gesture with orienting and vocalization, words

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Sample data: shaping a universal “give me” gesture

Multiple trials per session. Graph “best” trial of session (or first/last) if possible.

Score	Description
0	Grabs items, etc.
1	Takes items from container instead of adult
2	Takes item when held out by adult
3	Reaches for item
4	Reaches and holds arm still
5	Reaches with palm up with a physical prompt
6	Reaches with palm up with minor prompt to get hand into position
7	Reaches with palm partially turned
	Phase 2 updated table
8	reaches out and waits for 2-3 seconds
9	Reaches with palm out flat with adult's hand placed out for him to put his on
9	Reaches with palm out flat
10	orients to adult with body, head, etc. or other similar additional method to clarify the message
11	adds eye gaze or other topography

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Learning Goal: Teaching communication

Teaching Preverbal skill of Imitation.

- “Do This” imitation training feels like a demand and often requires physical prompting.
- Try: **Reciprocal Imitation Training (Ingersoll, 2010)**
    - Staff imitates learner preferred motions.
    - Staff verbally and simply describes motions.
    - Staff models a preferred action of learner while using same language to describe it.
        - Can use naturalistic language to encourage. “You try”.
    - Provide social praise if imitation occurs.
        - Gentle supports as needed.
- Megan DeLeon has an great CEU on this in her ABA Folklore Series.

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Learning Goal: Teaching communication

Learner does not initiate social interactions.

1. Staff must establish themselves as part of the fun.
2. Staff stands 1 meter away and waits for some sort of initiation
    a. Often this is a look, or a body orientation.
    b. Staff comes over while modeling correct invitational language “Play with you?, I would love to play”.
3. Once look, or body orientation is happening with minimal delay, shape the next response. Offer supports, “do you want me to play?”

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Examples: Teaching Communication

Scenario with profile 1

No functional communication, or imitation skills. Shaping the fcr is taking a long time so the bulk of the session is HRE.

1. **P**repare activity (vinegar volcanos) and AAC (pictures of vinegar, baking soda, etc.)
2. **O**ffer opportunities for communication (model asking for vinegar, color etc).
3. **W**ait for communication (5-7 seconds)
4. **R**espond to communication (client touches binder, provide desired object.

Scenario profile 2

Learner happily engages with you in drawing an elaborate mermaid scene (you draw the best mermaids).

1. After establishing a fun routine, stop near the table but don't sit down. Learner reaches out and hands you a pen. "Oh, you want me to DRAW?. I would love to.
2. Over time stand a little farther away and shape better initiation. Encourage words

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Examples: Teaching Communication

Scenario with profile 1

No functional communication, or imitation skills. Shaping the fcr is taking a long time so the bulk of the session is HRE.

Reciprocal Imitation Training

- Staff imitates learner (every time child crumbles clay, staff crumbles clay..
- Staff initiates crumbling clay and praises learner for crumbling clay after.
- Staff attempts novel but similar activity with crumbling clay.

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Documentation and Data: Teaching communication

Sample Goal: Learner will use a picture exchange for communication during a specific activity for 4 out of 5 opportunities across 3 sessions.

Sample Goal. Learner will imitate preferred movements during a specific activity for 4 out of 5 opportunities across three sessions.

Learner will use non verbal communications to invite staff to play for 4 out 5 opportunities across 3 sessions.

Learner will use a verbal invitation to invite staff to play for 4 out 5 opportunities across 3 sessions.

Consider a graph showing spontaneous initiations in a 20 minute period

Don’t forget baseline data.

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References

Douglas, S. N., & Gerde, H. K. (2019). A Strategy to Support the Communication of Students With Autism Spectrum Disorder. *Intervention in School and Clinic*, *55*(1), 32-38.

Ingersoll B. Pilot randomized controlled trial of Reciprocal Imitation Training for teaching elicited and spontaneous imitation to children with autism. J Autism Dev Disord. 2010 Sep;40(9):1154-60

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