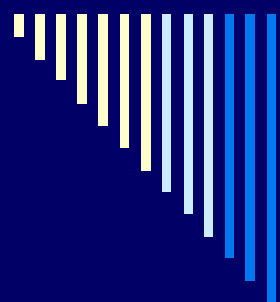


Hope District Training

Kim Weiner: Selpa Autism/Behavior Specialist



Introduction

- Who am I?
- Who are you?
 - Your position
 - How long you have been in the position
 - What your background is working with students with disabilities



What is ABA?

- Applied Behavioral Analysis (also known as Intensive Behavioral Intervention or IBI) employs methods based on scientific principles of behavior to build socially useful repertoires and reduce problematic ones (Cooper, Heron, & Heward, 1989)
- A scientific approach of studying behavior in order to understand and change behavior
- Based on over 50 years of studying animal and human behaviors



ABA continuedí

- Addresses behaviors with specific carefully programmed, constructive interactions with the environment.
- Focuses on systematically teaching small measurable units of behavior using discrete trial methodology
- Central to the successful application of this method is the art of differential reinforcement. That is, the therapist, parent, or caregiver learns how to systematically reward or reinforce desired behavior, and ignore, redirect, or discourage inappropriate behaviors.
- Also central to any well-run behavioral program is the close monitoring of what is working and what is not working. Data on all the child's learning are recorded regularly, and the teacher adjusts the teaching programs and protocol with respect to what the data indicate about the child's progress.



Research has shown

- Research shows that ABA is effective in reducing disruptive behaviors typically observed in students with ASD (such as: self-injury, self-stimulation, noncompliance)
- ABA has shown to be effective in teaching, commonly deficient skills such as: complex communication, social, play and self-help skills

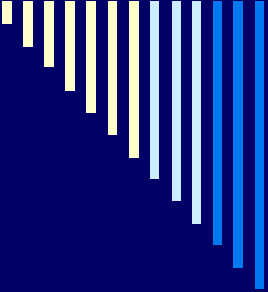


ABCøS

Antecedent-Behavior-Consequence Analysis:

A description of the antecedents and consequences associated with targeted behaviors to identify what variables reliably predict and maintain problem behavior (taken from PBS Glossary).





What is an antecedent, behavior and consequence?

- *Setting events*: Occurrences that affect a behavior at one point in time may change the likelihood of a targeted behavior at a later point.

- *Antecedent*: trigger behavior, what happens before???
Look for: Setting, people, activity, time of day, weather, prior activity

- *Behavior*: everything the student does, says to whom, to what and for how long or how many times

- *Consequence*: what happens after???
 - what need (function) is being met?



Reinforcement

- ❑ A reinforcer is something given immediately following the occurrence of a behavior that increases the likelihood of the behavior reoccurring.
- ❑ Reinforcers can be tangible items to initially start the learning process. This provides motivation if she is not intrinsically motivated to participate.
- ❑ Types of reinforcers should be as naturally occurring as possible.
- ❑ External reinforcement should always be faded when appropriate.



Are these good reinforcers?

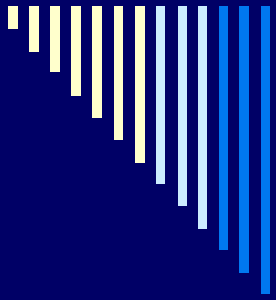
- Candy
- New pencil
- 5 minutes to read her favorite book
- Stuffed animal
- Extra recess
- Stickers
- Line leader
- Paper monitor
- Ferrari
- Playing a game with friends

- What are some reinforcers that you could use or are using with Bethany?



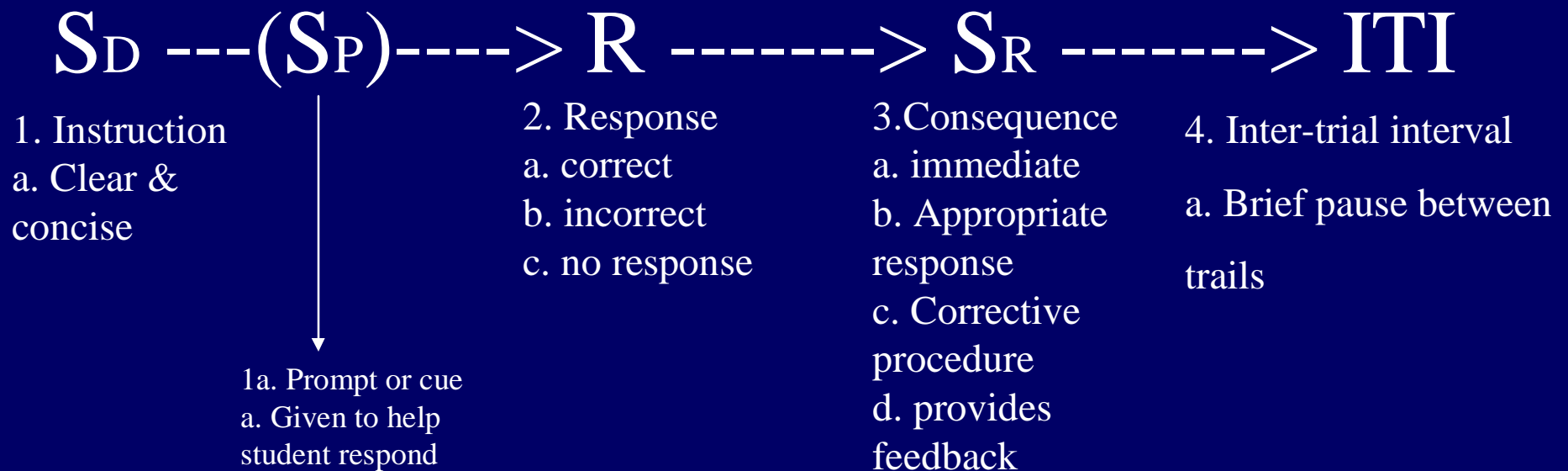
Discrete trial teaching (DTT)

- ❑ Began in the 1960s by Lovaas
- ❑ Based upon principles of ABA
- ❑ Many children with autism begin a program with rather short attention spans. In DTT, tasks are broken down into short, simple trials and mass practice is given.
- ❑ Consists of a series of distinct repeated highly intensive lessons or trails taught one-to-one.
- ❑ Each trial consists of a directive or request for the child to perform an action, the behavior (student's response) and a consequence (reaction from therapist).
- ❑ Tangible or concrete reinforcers (ie: food or objects) are initially used but faded quickly and replaced with natural rewards (ie: verbal praise, high fives, etc).
- ❑ Generalization: the instructions in good DTT programs are designed to change over time, in content (the verbiage of the instruction) and context (who is giving the instruction, where and when it is being given).



Anatomy of a discrete trail

A discrete trial consists of four components:





Examples of DTT

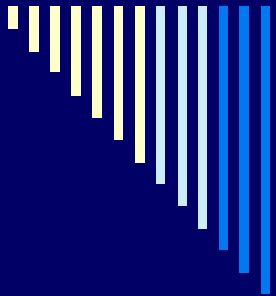
- What is this? (picture of a dog)
- A dog.
- That's right! (reinforce)

- How is she feeling?
- Sad.
- She is feeling sad, you're right.



Examples of DTT

- ❑ What do you like about PE?
- ❑ (if prompt needed) Remember at PE there is stretching, running, playing games, learning new games, etc)
- ❑ I like running and playing games.
- ❑ Great answer! I like stretching! (use verbal reinforcement or tangible reinforcement)



How can DTT be used to assist Bethany?

- ❑ Initially, teach Bethany social skills in highly structured small groups.
- ❑ One skill should be taught at a time (ie: asking questions, answering questions, etc).
- ❑ Bethany should be verbally and extrinsically reinforced for the use of these skills.
- ❑ Training sessions would be most effective if training occurred in environment that skills will be used in (and immediately before the event).
- ❑ Generalization of these skills should be planned.
- ❑ *How might DTT be used with Bethany?*



PRT (Pivotal Response Treatment)

- ❑ PRT is a naturalistic treatment approach developed by Robert & Lynn Koegel & Laura Schreibman.
- ❑ PRT focuses on two pivotal behaviors that affect a wide range of behaviors in children with autism: motivation and responsivity to multiple cues, so positive changes in these behaviors should have widespread effects on other behaviors.
- ❑ PRT works to increase motivation by including components such as child choice, turn-taking, reinforcing attempts and interspersing maintenance tasks.
- ❑ PRT has been used to target language skills, play skills and social behaviors in children with autism.



PRT Components

□ PRT Components:

The question / instruction / opportunity to respond should:

- Be clear, uninterrupted and appropriate to the tasks
- Be interspersed with maintenance tasks
- Include child choice
- Include multiple components when appropriate

□ Reinforcers should be:

- Contingent upon behavior
- Administered following any reasonable attempt to respond
- Related to the desired behavior in a direct way



Examples of PRT

□ Question asking

- Addie's teacher hides a balloon. Addie asks "where is it?" The teacher replies "where is what?" Addie uses a longer sentence, "where is the balloon?" Teacher tells her.

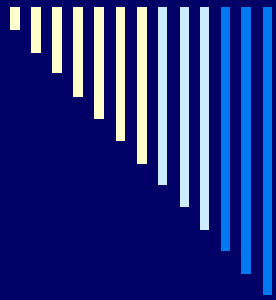
□ Initiations with siblings

- Monica needs a marker. The aide states "ask your friend who has the can of markers. Remember to use her name." Monica gestures toward the marker can and says "Maria, I need a marker." Her peer gives her one. A few moments later, the aide prompts Monica to show her drawing to her neighbor. Monica turns toward her peer and says "I made a sun." Her peer replies, "I made flowers and they are growing."



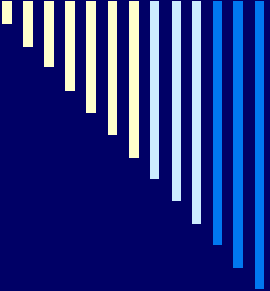
Examples of PRT

- **Initiating social interactions**
- Jack loves to talk about airplanes but has difficulty with on-topic initiations when conversing with others about different subjects. His teacher uses a self-management system to help Jack learn to make appropriate on-topic initiations. Each time Jack makes an on-topic initiation following a subject introduced by his teacher, he gives himself a point and gets to trade it for a favorite candy. His teacher says, "Today I ate vanilla ice cream." Jack replies "I also like ice cream," and gives himself a point.



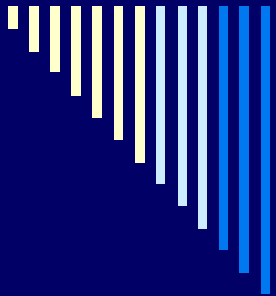
How is PRT different from Discrete Trial?

- Specific components of DTT include breaking a skill into smaller parts, teaching one sub-skill at a time, prompt fading and shaping appropriate behaviors until mastered.
- PRT is a child directed naturalistic treatment; DTT is a more structured therapist directed treatment PRT uses reinforcement directly related to the task; DTT uses reinforcement not necessarily related to the task (e.g. if a child attempts a verbal request for a stuffed animal, the child received the animal, not a piece of candy or other unrelated reinforcer).



How can PRT be used to assist Bethany?

- ❑ Organize seating arrangement into small groups (4).
- ❑ Provide continual opportunities for students to work in pairs or groups.
- ❑ Give students choices, share materials, organized play episodes
- ❑ Set up opportunities for Bethany to seek assistance from peers (reduces dependency on aide and facilitates communication)
- ❑ Increase meaningful verbal and nonverbal communication: look for mutually reinforcing topics and activities so both Bethany and peers are likely to continue after initial prompt
- ❑ Implement buddy systems: Buddies can help each other with school assignments, waiting in line, socialization, transitions, snack time, lunch and bathroom. Students can teach each other new games.
- ❑ Provide social support: Teach Bethany to engage in appropriate behaviors (ie: cheering on a classmate, high fives to one another, etc)



How can PRT be used to assist Bethany?

- ❑ Provide opportunities for small talk: Comment, compliment, or observation (ie: cool shirt, fun game or talk about how fun PE was)
- ❑ Provide new games and activities: Select mutually reinforcing games and allow Bethany to lead the game (would want to prime game with Bethany first)
- ❑ Use priming: Prime Bethany before activities in which she can initiate or respond to peers. Provide high levels of reinforcement during priming.
- ❑ Arrange other activities/situations that are highly motivating & familiar to Bethany.
- ❑ Set up instances in which Bethany would need to interact with peers in order to participate in the activity.
- ❑ Arrange a “sharing time” in class (ie: talk about object or share photos. Bethany can ask questions about object or photos or respond to students’ questions about her items)
- ❑ *How & when can PRT be used with Bethany?*



Incidental teaching

- ❑ Derived from ABA
- ❑ Involves structuring and sequencing educational objectives so that they occur within ongoing, typical activities and take advantage of student interests and motivation (McGee, Daly, & Jacobs, 1994).
- ❑ The basis for incidental teaching lies in the student initiating a teaching session. Lessons involve interactions in which the child expresses interest and the adult responds with prompts and praise.
- ❑ Example: Teachers arrange the environment by placing preferred toys and activities of each student within sight, but not within reach, to encourage the student to initiate teaching sessions based on preplanned learning objectives.



Steps to incidental teaching

- Once a teacher identifies naturally occurring situations in which a child expresses interest, she or he then uses a series of graduated prompts to encourage the child's responses. Four levels of prompts are associated with incidental teaching.
- Level 1 - institute a 30-second delay when a child displays an interest in a specific object or material
- Level 2 - the teacher prompts the child to ask for the desired object
- Level 3 - involves a more elaborate request by the teacher
- Level 4 - the correct response is modeled by the teacher and the child is prompted to imitate the response. Teachers are taught to use the lowest level of prompt that would encourage the correct response by the child.



Using incidental teaching in the classroom

When trying to create opportunities for peer interaction, teachers and staff need to ask themselves a few questions such as:

- ❑ What social skills goals do I have for the individual children in my class?
- ❑ What do I typically do with, or for, the children?
- ❑ Could a child do this "job?" (ie: helper)
- ❑ Is this activity something that happens frequently? This question is important because we want to create opportunities that occur often, thus providing a wealth of opportunities over the course of a day, week, month, and school year.
- ❑ Can I ensure that support will be available so that all children can be successful in carrying out this task?

By asking these questions and looking at their daily schedule, caregivers can identify opportunities during natural activities and routines to support or encourage peer interactions.



Example of incidental teaching

- When Mrs. Perkins opened the toy cabinet, Kyle tried to grab a toy car from the cabinet. Mrs. Perkins put her hand over Kyle's on top of the toy and waited, looking expectantly at Kyle. Kyle did not respond. Mrs. Perkins said, "What do you want?" Kyle says "Car." Mrs. Perkins said, "That's right, car," and allows Kyle take the car to the play area.
- Mrs. Perkins joins him and says, "You have a red car? What color is it?" Kyle says, "Red." Mrs. Perkins says, "Very good. It is red. What color is Jenny's car?" Kyle says "Yellow." Mrs. Perkins says, "Yes, yellow. You and Jenny can drive the cars on the mat." The teaching could stop here, or Mrs. Perkins could continue to work with Kyle on colors, or a social interaction if he expressed interest in playing with Jenny.
- What are some ways you could use incidental teaching in the classroom?



Facilitating peer interactions

- It is important that caregivers are available to facilitate peer interactions and provide cues (e.g., general or specific verbal cues, gestures, or visual cues) or assistance (e.g., helping a child hand napkins to peers or pass a plate of snacks to a friend) if necessary.
- For example, an adult assisted Haley in collecting the suns by verbally cueing her to ask the other children for their suns. Also, an adult provided physical assistance as Haley walked around the group collecting the props.



Opportunities for peer interactions

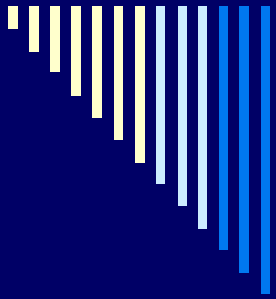
- Opportunities for peer interactions should be identified within different activities throughout the day to provide for practice and mastery of peer-related social skills. By looking at some activities that typically take place in school, caregivers can see how many opportunities for peer interaction can be created throughout the day.
- What are some activities within Bethany's day that peer interactions might take place?



Social skills training

Kamps, Debra M., Ellis, Cynthia (1995)

- ❑ Social skills must be modeled and taught directly if students are to master them (McGinnis & Goldstein, 1990).
- ❑ Teach these skills in small group lessons using direct instruction format.
- ❑ For each specific skill (e.g., sharing), a sequence of teaching was suggested. This consisted of introducing and demonstrating the skill (ie: question asking), teacher modeling of examples and non-examples, and child-peer practice with teacher feedback.
- ❑ At the end of the lesson, children were given 8 to 10 minutes of structured play while the teacher prompted the children to practice the skill with their peers (the skill introduced in the lesson).



- The teachers monitored and reinforced the children during this time by drawing happy faces on a chart each time each child used the skill. Peer models were specifically prompted during the lessons to interact appropriately with the target children and other peers.
- In addition to the social skill lesson and practice during the week, teachers were asked to use incidental teaching to promote generalization of skills.
- A goal was set as to how many times the skill would be used for the week.
- Teacher used tokens and verbal praise when students were observed using the skill. At the end of the week, students were given specific rewards.



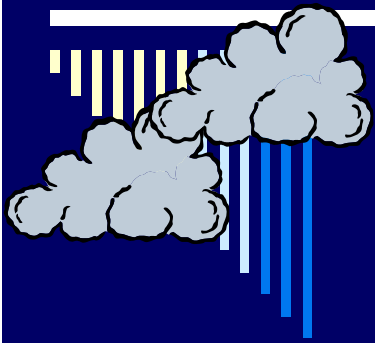
What does this tell us about working with Bethany?

- ❑ She will most likely benefit from a combination of direct instruction on specific social skills within a small group setting and real world practice (ie: answering and asking social questions and commenting)
- ❑ Bethany should be taught these skills using modeling, examples and non-examples, guided practice and teacher feedback.
- ❑ Bethany and the teacher should work together to develop clear goals (ie: a self-management system).
- ❑ Bethany can benefit from social praise & extrinsic motivation.
- ❑ Activities should be structured in a way that entices Bethany to engage with other students (ie: playing her favorite game, talking about something she likes, etc).
- ❑ If training does not take place immediately before the activity, Bethany should be primed and reminded of her goals and specific skills (ie: verbal discussion, social stories, quick practice, etc).
- ❑ Staff should constantly communicate regarding her level of prompting and areas of success and difficulty.



Prompting

- ❑ A prompt can be defined as a cue or hint meant to induce a person to perform a desired behavior.
- ❑ Some children become quickly dependent on prompts, unfortunately, and wait for the adult to provide that prompt before they make any type of response.
- ❑ Consequently, prompting should be faded as soon as possible. That is, the prompting should be gradually diminished until the child is doing performing the behavior on his own.



Effects of prompt dependency

- Over prompting can cause these detrimental effects:
 - Student's ability to be an independent learner
 - Physical separation from classmates
 - Unnecessary dependence
 - Interference with peer interactions
 - Feeling stigmatized
 - Limited access to teacher instruction
 - Interference with teacher engagement
 - Loss of personal control
 - Loss of gender identity
 - May provoke problem behaviors



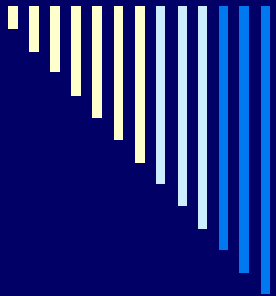
How to stop prompt dependency

- ❑ Ensure student has effective and efficient way to communicate with others (verbally, PECS, etc)
- ❑ Use wait time--allow students time to do the task before jumping in
- ❑ Provide only as much help as the student needs
- ❑ Model (show student) lead (watch and assist student) check (go away and check back)
- ❑ Make sure student has needed materials or is prepared for the activity (priming)
- ❑ Facilitate and fade
- ❑ Teach student to ask for help
- ❑ Decrease proximity (hovering interferes with natural supports)
- ❑ Natural supports (visuals, signals, schedules, peers)

Reducing prompt dependency

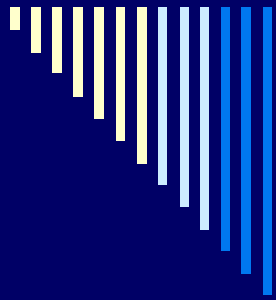
- Understand what accommodations and modifications the students requires to participate in the activity in order to facilitate independent functioning
- Use more intensive support only when natural supports are not sufficient
- Use least intrusive prompts first! Always work to fade prompts!
- Confer with teacher that activity is at student's instructional level, not frustration level
- Never underestimate your student!





Types of prompts (least to most intrusive)

- **Verbal prompting** is the providing of a verbal instruction, cue, or model, or overemphasizing the correct word in an array of choices. A full verbal prompt might involve the adult saying the entire word or phrase that he is trying to illicit from the child, whereas a partial verbal prompt might be providing only the first sound or syllable to cue the child to proceed. (Can be most or least intrusive, depending on task)
- **Positional prompting** involves arranging the materials of the trial so that the correct item is in a position advantageous to the child. For example, if a trial consists of picking a picture of a named object from a group of three pictures, one might initially arrange the trial so that the correct choice is directly in front of the child, while the two incorrect choices are on the other side of the table. As the child progresses, the other cards can be gradually moved closer until they are even with the correct choice.
- **Gestural prompting** includes pointing to, looking at, moving, or touching an item or area to indicate a correct response.



- **Modeling** is the acting out of the target behavior by the adult or another child with the hope that the child will imitate.

- **Physical prompting (full or partial)** involves actually touching the child. A full physical prompt might involve moving the child through the entirety of the behavior (for example, guiding his hand to select the right card from an array, and then guiding it further to hand the card to the adult). A partial physical prompt might be just touching a hand or shoulder to get the child started on the behavior.



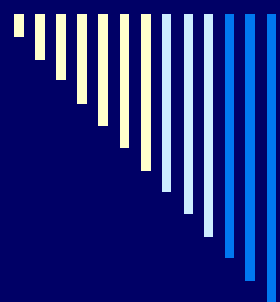
How to use and fade prompts

- ❑ 1. **Define target behavior.** Define exactly what behavior we want to change. In this case it means defining the behavior we want to prompt.
- ❑ 2. **Identify suitable prompts.** Choose a prompt that will reliably produce this behavior.
- ❑ 3. **Prompt, reinforce and fade.** The reason for prompting behavior is so that you can reinforce it. Reinforcement provides the motivation for the child to learn. After presenting the prompt, you wait a few seconds before prompting again. The reason for waiting for the few seconds is to see whether the child will attempt a correct response thus letting you know what prompt level to use. As the target behavior appears, begin to fade the prompt.
- ❑ 4. **Monitor results.** This is essential to know you are progressing satisfactorily.
- ❑ 5. Return to a stronger prompt only when necessary!



Discussion

- Discuss prompts used to facilitate peer interactions between Bethany and peers.
- Remember, prompting may vary depending on environment and activity.
- How can you begin to fade these prompts?



Differential Reinforcement

- Differential reinforcement means that one member of a response class is reinforced while other previously emitted members of the same response class are not (Cooper, Heron & Heward, p.329).
- Differential reinforcement shapes behavior by reinforcing successive approximations to the desired outcome.



Differential Reinforcement

- How to differentially reinforce:
 - 1) Identify the first behavior to reinforce. The first behavior should already occur at some minimal level
 - 2) Proceed in gradual stages. In small steps, start raising the ante for reinforcement after a step is mastered
 - 3) Do not reinforce one level of performance for too long (student will get stuck at the same level)
 - 4) Continue to reinforce the behavior once the student can emit it (otherwise the behavior will be lost or return to a lower level)



Example of differential reinforcement

You want Bethany to identify an emotion and the reason for the emotion.

- ❑ Bethany sees a girl crying and says "sad."
- ❑ You reinforce that response (verbal praise and/or external reinforcement).
- ❑ Next time Bethany sees a girl crying you help prompt her to say "she is feeling sad."
- ❑ From now on, you only reinforce this response, not just the word "sad" (you continue to work on expanding this)
- ❑ The next time Bethany sees a girl crying she says "she is feeling sad because she lost her favorite pencil."
- ❑ This response is now reinforced instead of the previous.
- ❑ Once she reaches the goal, continue to reinforce this response.
- ❑ *You try, pick a behavior that you can shape using differential reinforcement.*



Differential reinforcement of high rates of behavior (DRH)

- Many students with ASD do not initiate or respond to the communicative interactions of others even though they possess adequate verbal language abilities. Differential reinforcement of higher rate behavior (DRH) is a procedure in which a reinforcer is given following a specified period of time whereby the identified targeted behavior occurred at or above a pre-specified level.
- DRH attempts to increase the rate of a particular behavior.



Example of DRH

- Dana is capable of interacting and, in fact, is quite social in the cafeteria. But during an academic lesson, she shuts up like a clam. Mr. Rollins wants to use a DRH procedure that will reinforce Dana each time she initiates or responds to a social bid toward or by her peers. When he took a baseline, revealed that Dana doesn't initiate any interactions during the science class. The baseline taken in the cafeteria revealed a different pattern: Dana interacted five or more times during the 30-minute lunch period. Thus, during the first week of the program, Mr. Rollins required Dana to initiate at least five interactions with her peers during the 50-minute lab period and to respond to at least three interactions by others during that same time.



Why it is important to collect data

Objective measurement enables a person to describe the change in behavior in precise, consistent and publically verifiable ways
(Cooper, Heron and Heward, 2007).

- Baseline tells you the current frequency of the behavior (prior to intervention).
- Informs teacher if the behavior is decreasing or increasing as a result of a specific intervention
- Shows student progress and reinforces staff to continue with intervention
- Informs decision making and whether modifications to the plan are necessary
- Informs teacher when plan is ready to be faded
- Gives staff an objective way to assess current behavior



Data Collection

- Event recording: Tally or count of behavior. Must have a clear beginning and end.
 - Ie: Communicating emotional theme
 - Ie: Asking Wh questions
 - Spontaneous initiations
- Rate of response: Frequency of behaviors divided by a unit of time.
 - Ie: Number of times Bethany initiated in a 5 minute time period.
- Duration: used to record high rates, extended or continuous behaviors.
 - Length of interaction between Bethany and peers.



Data Collection

- Latency recording: Measurement of elapsed time between the direction, cue or task and the initiation of the behavior.
 - Ie: The time from when peers leave to when Bethany realizes they are gone.
- Interval recording
 - Partial interval: time is broken down into intervals (ie: 10 seconds) and if the behavior occurred at all during the interval it is recorded. If the behavior does not occur, it is not recorded.
 - Whole interval: time is broken down into intervals but behavior is recorded only if it occurs throughout the entire interval.
- Permanent product: the result of behaviors that produce tangible items (ie: work samples, puzzles, coloring, writing, etc)



Data collection

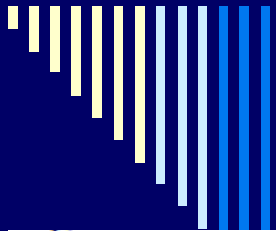
- ❑ What are some easy ways to collect data?
- ❑ How will this be done in the classroom?
- ❑ What about on recess or lunch? (remember getting too close could interfere with Bethany's interactions)
- ❑ Who will collect and analyze the data to ensure the prompts are being faded?

Self-management system



□ How to set up self-management system

- 1) With student, determine what behaviors student will monitor (define the behavior/s)
- 2) Help student to set goals. Goals should be specific & challenging but achievable (Johnson & Graham, 1990).
- 3) Decide what criteria to earn reinforcement (ie: has to get 5 checks, complete every assignment, etc)
- 4) Select appropriate data collection system and instruct student in how to collect the data (ie: by time, assignment, specific behaviors, etc)
- 5) Both monitor during a day and compare results at the end of the day (or session)
- 6) Every so often, monitor student to ensure that student is still monitoring correctly



Self-management system

Name:
Date:

Option #1 More than 1 Break/Think Time
Option #2 Teacher Choice

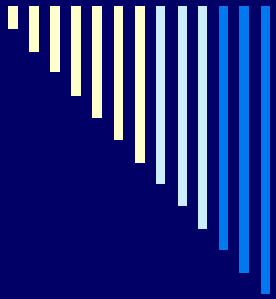
Behaviors → Schedule	Stay quietly in class	Ask for help	Follow Directions	Stay on Task/Complete at least ½ of assignment	Teacher Initials
8:00- 8:25					
8:25 – 8:45					
8:45-9:15					
9:15-9:50					
10:02- 10:30					
10:30 –10:55					
10:55–11:20					
11:20-11:50					
12:30 – 1:00					
1:00-1:40					



Remember to communicate with one another

- ❑ You **MUST** communicate regularly regarding student's progress, difficulties, motivators, etc.
- ❑ This provides the student(s) with consistent expectations across aides and teacher. (ie: discuss the level of prompting required, natural and peer supports, level of difficulty and length of assignments, etc)
- ❑ Set aside 10-15 minutes to talk with team members each week.
- ❑ Talk with the teacher about lesson adaptations and modifications.





Questions, Comments?

Remember: these techniques will only become easier if you practice them!

Thanks and good luck! 😊