Fostering Communication Skills in Preschool Children with Pivotal Response Training

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Training Objectives

1. Participants will name two pivotal behaviors associated with improving behaviors and increasing adaptive capacities.
2. Participants will name three PRT principles.
3. Participants will name the four phases of joint attention routines.
4. Participants will name four main goals that sensory social routines accomplish.

Some Background

Core communication deficits in children with ASD fall into two major areas: joint attention and symbol use. National Research Council

Joint attention: difficulty coordinating attention between people and objects.

Symbol use: difficulty learning conventional or shared meanings for symbols.
Joint Attention Component Skills

- Orienting and attending to a social partner
- Shifting gaze between people and objects
- Sharing affect or emotional states with another person
- Following the gaze and point of another person
- Ability to draw another person’s attention to objects or events for the purpose of sharing experience
- Using conventional gestures
- Learning conventional meanings for words
- Using objects functionally and in symbolic play

Pivotal Response Training (PRT)

- Developed by Shreibman & Koegel and first published by Robert and Lynn Koegel in the 1980s.
- Developed to optimize children’s motivation to interact with adults and engage in repeated learning opportunities. Early Start Denver Model for Young Children with Autism

Pivotal Response Training (PRT)

- A method of systematically applying the scientific principles of applied behavior analysis (ABA)
- Builds on learner initiative and interests
- Particularly effective for developing communication, language, play, and social behaviors
- Developed to create a more efficient and effective intervention by focusing on four pivotal learning variables: motivation, responsivity to multiple cues, self-management, and social initiations

**Pivotal Behaviors**

- Motivation
- Response to multiple cues
- Self-management
- Self-initiation

**Motivation Strategies**

- Learner attention
- Shared control
- Learner choice
- Varied tasks – highly motivating
- Acquisition and maintenance tasks
- Reinforcing response attempts
- Reinforcers are directly linked to the learner’s goals  
  *R. L. Koegel et al., 2001*

**Multiple Cues**

- Adult designs multiple and varied communication opportunities.
  - Adult scaffolds to support the child in making multiple communications involving several different communicative functions during each play activity.
  - Opportunities to request, protest, comment, ask for help, greet, name, expand, offer information, and so on.
  - Adult techniques include modeling, restatement, expansion of child utterances, and repetition of child utterances embedded in meaningful activities.
Example: Multiple Opportunities for Child to Make Choices During a 5-Minute Snack Activity

LV: “Are we having crackers or applesauce?”
C: “Cookies”
LV: “All right” (Pretends to have difficulty opening the package)
LV: “What should I do?”
C: “Open it.”
LV: “Okay. I’ll open it.”
LV: “There we go . . . opening the cookies.”
C: “In er” (reaching for the cup)
LV: “Oh, you want them in the _______.”
C: “Cup”

Example: Multiple Opportunities for Child to Make Choices During a 5-Minute Snack Activity (continued)

LV: (drinking juice) “What do you want?”
C: “I want some a dat.”
LV: “You want some of that. All right.”
C: “Put in da cup.”
LV: “Oh, all right. Let’s put them (cookies that are in the cup) in the bowl. Good idea.” (She dumps the cookies in the bowl)
LV: “Did we get ’em all out? Okay.” (Gives cup to child who tries to pour the juice while holding the cup)
LV: “Let’s put the cup on the table” (as she guides him to do so)
C: “Yeah. On there.”
LV: “On there. That’s a good idea. Okay, go ahead and pour.”
C: “Unten hold it.”
LV: “Oh right. You’re a big boy. You hold it. Hold the cup.”
C: “(Gets to pour the juice independently for himself and for LV)”

Benefits of Teaching with PRT

• Children are more motivated to perform
• Better generalization of new skills
• More spontaneous responding
• Less problem behavior
PRT: Based Principles of Behavioral Science (ABA)

Three components necessary for learning:
1. A stimulus (antecedent) must cue the child to respond – and the child must attend to the stimulus.
2. The child must perform a behavior immediately following the stimulus (behavior).
3. The child must experience some type of consequence that marks a correct performance (consequence). ESDM

Effective Teaching Practices Used in ABA

• Capturing attention
• Teaching within an A-B-C sequence
• Prompting
• Managing consequences
• Fading
• Shaping
• Chaining for complex tasks like speech and syntax
• Functional assessment

Teaching Principles from ESDM

• Adults modulate and optimize child’s affect, arousal, and attention.
• Adults use positive affect.
• Turn-taking and dyadic engagement throughout.
• Adults are sensitive and responsive to child’s states, motives, and feelings.
Teaching Principles from ESDM (cont)

- Multiple and varied communicative opportunities.
- Elaboration of activities.
- Adult language: consistently appropriate developmentally and pragmatically to the child's verbal and nonverbal communicative intent and capacity. “One-up” rule.

PRT Principles

- Reinforce child attempts
- Alternate requests for new behaviors (acquisition skills) with requests for already learned maintenance skills. Alternate more difficult tasks with easy language tasks.
- Reinforcers have a direct relationship to the child's response or behaviors.

PRT Principles (cont)

- Take turns in the activities: shared control of the interaction
- Give children choices and follow their leads.
- Instructions or other antecedents are delivered clearly.
  - Have the child's attention
  - Stimulus is appropriate to the activity
  - Present stimulus before the behavior is requested.
Multiple Opportunities for Child to Make Choices

- Choosing play materials:
  - Adult offers different materials, e.g., pegs and markers
  - Adult observes that child is not interested – adult quickly teaches how to protest – “no peg” “no markers”
  - Adult offers peg or hammer
  - Adult asks child whose turn it is
  - Adult asks child where you want to put the peg
  - Adult asks child if he wants to play more with the hammer or be all done.

Verbal Language Development

- Verbal language develops from non-verbal social communication behaviors as well as phonemic development.

Joint Activity Routine: Four Phases

- Opening/Set-up phase: establish the theme of the play. The theme is the platform for the objective being addressed (e.g., /e language, imitation, etc.)
- Theme phase: first play activity – adult and child are engaged in a definable play activity with objects or a social game.
- Elaboration phase: variation on the theme to keep it interesting or to highlight different aspects of the activity.
- Closing phase: attention is waning
Joint Attention

• 1. Teaching occurs: adult responds to the child’s initiation with a model, word, gesture, or some other cue that is the stimulus for the child's behavior that will follow.
  - Child reaches for material. Adult picks it up and offers it to the child while naming it.
  - Adults waits for or prompts the targeted communication behavior from the child (point, word, phrase, sound, gaze) before handing it over. Reinforces the child's communicative act.
  - Multiple pieces; multiple turns.

Teaching Inside Joint Activities

• 2. Teaching occurs: in adult prompts, if needed, to ensure the child responds with a target behavior to the antecedent behavior.
  - Adult and child begin to develop a joint activity with the object the child is holding.
  - Follow the child’s activity and then use of one the objects to model a target behavior, waiting or prompting the child to follow your model.
Teaching Inside Joint Activities

3. Teaching occurs: in the delivery of the positive consequence that follows the child’s response.

- Once the child completes the act, the child gets the material and a chance to play as he/she wants – reinforcement for performing the target act.
- Then the adult takes another turn, repeating the same skill or targeting another.

Social Aspects of Object-Based Joint Activities

- Children show their awareness of joint attention through giving, sharing, showing, and pointing to materials.
  - By shifting gaze between objects and communication partner.
  - By looking up from objects to share smiles with partner.

Video

- [https://www.youtube.com/watch?v=IJSKXD4wyMc](https://www.youtube.com/watch?v=IJSKXD4wyMc)
Objects in Joint Activities

- Child and adult take turns by trading materials back and forth or by using double sets of materials. Shared control!
- Sometimes adult models a new action and has the child follow their lead. Sometimes the adult imitates the child. Shared control!
- Turns are marked by social communication acts and foster the shifting of attention from objects to people and back again. Joint attention!
- These attention shifts should happen several times per minute.

Sensory Social Routines

- Draw the child's attention to the partner's face, voice, body movements, and gestures.
- Teach that other people's bodies and faces "talk."

Partner-Focused Joint Activities: Sensory Social Routines

- Each partner's attention is focused on the other person, rather than on objects.
- Dyadic activity: two people engaged in the same activity in a reciprocal way:
  - taking turns
  - imitating each other
  - communicating with words, gestures, or facial expressions
  - building on each other's activities.
Main Goals That Sensory Social Routines Accomplish

• Draws child’s attention to other people’s social-communication acts, especially eye contact and the face.
• Develops child’s awareness of facial expressions and their ability to share emotional expressions face-to-face with another.

Main Goals That Sensory Social Routines Accomplish

• Increases child’s communications to initiate, respond to, and continue social interactions through their eye contact, facial expressions, gestures, sounds, and words.
• Optimizes child’s arousal, state, and attention.

Child 1 Skills

• Follows a proximal point to place objects in a container.
• Performs one-step routine directions involving body actions paired with a gestural cue.
• Uses goal-directed reach to request.
• Vocalizes with intent.
• Points to indicate a choice between two objects.
• Maintains engagement in sensory social routines for 2 minutes.
• Responds to preferred objects and activities with gaze, reach, smiles, and movements.
• Imitates 8 one-step actions on objects.
• Imitates 10 visible motor actions inside song/game routines.
Child 1 Objectives (choose one)

• Child 1: In a 20-minute play routine, Child 1 will produce seven or more consonants in spontaneous vocalizations.

• Child 1: In a 20-minute play routine, Child 1 will produce five CVCV with differing CV sequences (variegated babbling).

Child 2 Skills

• Identifies many common objects and their pictures.
• Follows one-step novel commands involving familiar objects/actions
• Differentiates early size concepts. e.g., big/little
• Produces two- to three-word combinations for a variety of communicative intentions
• Comments and requests using early possessive forms (mine, yours)
• Responds appropriately to “What?” questions
• Shares and shows objects when partner requests
• Uses polite terms: please, thank you, excuse me.
• Imitates and builds different block structures using a variety of building materials (blocks, Legos, etc.)

Child 2 Objectives (choose one)

• Child 2: In a 20-minute play routine, Child 2 will follow five or more unrelated instructions in a novel context.

• Child 2: In a 20-minute play routine, Child 2 will respond appropriately to “Where?” questions.
Instructions

• Whole Group: Break into teams of _____ people. Teams count off: 1, 2, 1, 2

• Your Team: Develop a 20-minute session of joint activities to address one of the objectives for your assigned child. Please write neatly in ink!
  • Share your plan with the whole group.
  • Turn in your plan to me before leaving.

• Me: I will collect your plans, scan them, and put them all in a file.

• You email Carolyn Biswell at cbiswell@salud.unm.edu and request the file. She will reply and email it to you as an attachment.

Child 20-Minute Joint Activity Routine

Child 20-Minute Joint Activity Routine
Resources