

**ECI WEBINAR SERIES:  
PRACTICAL STRATEGIES FOR  
WORKING WITH CHILDREN WITH  
AUTISM**

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## PART 4: TEACHING SPECIFIC SKILLS RELATED TO AUTISM

The focus in this presentation will be on some key skills that are so important to young children with autism/PDD that they should be the focus of intervention for almost all young children with an ASD diagnosis. These include:

- Joint Attention
  - Imitation
  - Play
- **However, each child is an individual and an individualized approach is not only recommended, but essential.**



# REFERENCES RELATED TO JOINT ATTENTION

- This first reference is a very short article that looks at infants with autism and joint attention (2010):
  - [http://www.associatedcontent.com/article/411447/infants\\_joint\\_attention\\_development.html?cat=72](http://www.associatedcontent.com/article/411447/infants_joint_attention_development.html?cat=72)
- The second reference is for a complete research article from the journal *Developmental Psychology*. The title is “Early Social Attention Impairments in Autism: Social Orienting, Joint Attention and Attention to Distress” by Dawson, Toth, Abbott, Osterling, Munson, Estes, and Liaw (2004)
  - <http://infantlab.fiu.edu/articles/Dawson%20et%20al%202004%20Dev%20Psychology.pdf>



# JOINT ATTENTION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

Here is one definition of joint attention:

- Joint attention is communicating or learning new information through the acts of following the gaze or directing the gaze of others; through the acts of following other's gestures intended to direction attention or making gestures intended to direction the attention of others.

(Reference: "Infants' Joint Attention Development Model Helps Understand Autism" by K. Patrick)



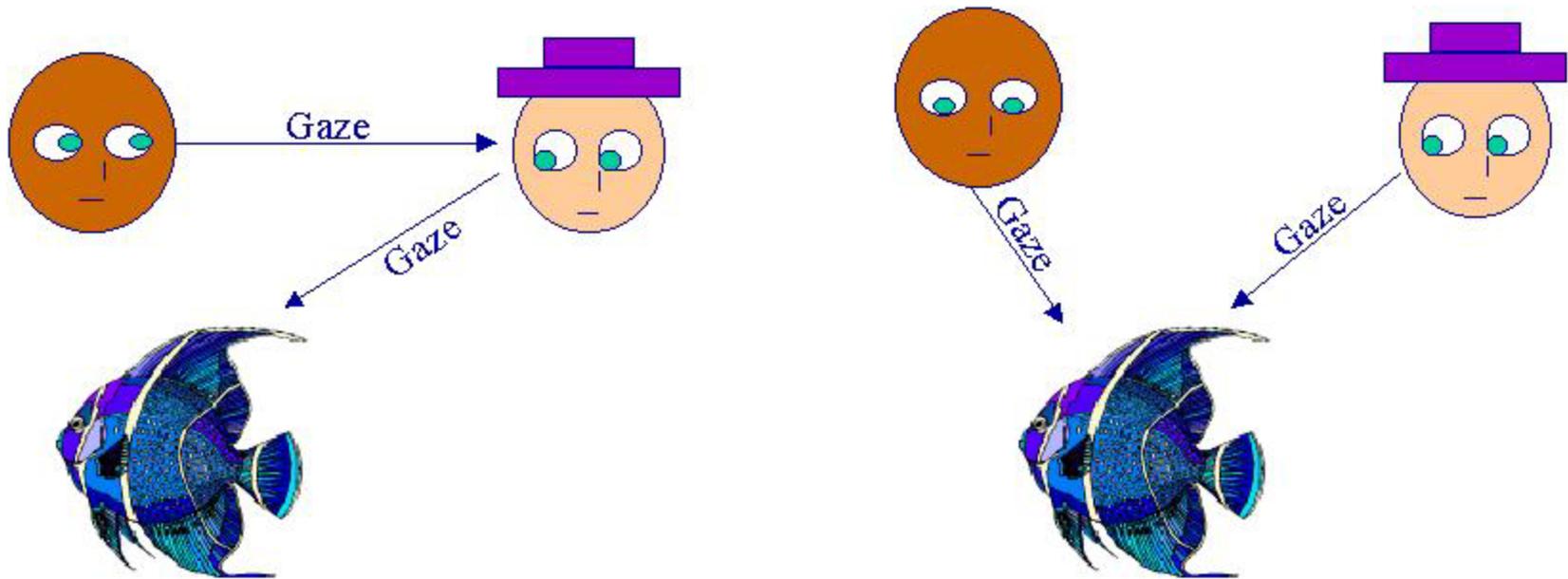
# JOINT ATTENTION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

Here is an explanation from the same article that may help clarify the term:

- “Joint attention is more than two people looking at the same object: I see John looking at the ball so I look at it, too. John sees me looking at the ball so he looks at it longer. Joint attention involves an acknowledgement between the two (or more) persons that the attending is a mutual act.”
- Joint attention is a nonverbal tap on the shoulder saying, “Hey, look here,” with a nonverbal yet answering, “Oh yeah, I see that.”



**Another Definition: Joint Attention is the process of sharing one's experience of observing an object or event, by following gaze or pointing gestures. It is critical for social development, language acquisition, cognitive development...**



# JOINT ATTENTION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Joint attention is involved in the development of a theory of self: A recognition of unique separateness and identity.
- There is current research examining brain functioning and the idea that joint attention is the integration of two basic forms of attention: One related to external details like other people and the environment and one related to yourself.



# JOINT ATTENTION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

Identifying impairments in young children with autism allows for early identification and also helps us understand the nature of the disorder.

- The other article referenced (Dawson, Toth, et.al.) focused on three types of impairments related to social attention: Social orienting, joint attention, and attention to the distress of others.
- Children with autism performed significantly worse than the comparison groups in all three of these areas, but especially social orienting and joint attention.
- ***Joint attention was the best predictor of concurrent language ability.***

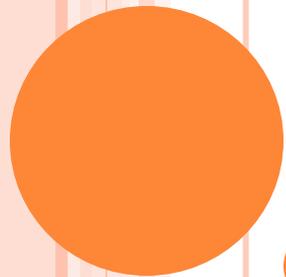


# JOINT ATTENTION: VIDEO EXAMPLE

- This video clip, available on YouTube, is from an early video that some of you may have seen in prior training.
- While it is dated, the research referenced in the video, is still pertinent.
- It has been validated by later research.
- While watching this clip, you will hear an excellent explanation and see examples of how joint attention is impacted by autism/PDD.
- It can be found at:

<http://www.youtube.com/watch?v=tif4U3OjT2M>





## **ANY QUESTIONS?**

**We will take a few minutes to allow you to submit questions.**



# QUICK REVIEW

Joint attention means:

- A. Two people who like the same thing.
- B. Two people looking at the same thing.
- C. Two people following each other's gaze and/or gestures, checking in with each other, and looking not just at the same object but sometimes at each other.
- D. Two people looking at each other.



# DEVELOPMENT OF JOINT ATTENTION

- Develops about the end of 1st year – 2 forms:
  - Responding to another person’s directive attention – develops at end of 1st year
    - At 12-14 months, infants begin to “check back” and look at the person after first looking at the object
  - Initiating attention of another person to the object or event
    - Gaze shifts between object and familiar person
    - Adults usually respond by labeling object or event
    - Later combined with gestures, verbalizations, pointing, reaching, showing
- By the middle of the 2nd year, joint attention is well-developed

Reference: “Joint Attention in Children with Autism: Theory and Intervention” by Jones and Carr (2004).



# JOINT ATTENTION AND AUTISM

- Some researchers say that deficits in joint attention are the earliest indicators of autism
  - Can be detected before 1 year old
  - Infant screening measures for autism (e.g., [CHAT](#)) include assessments of joint attention
- Compared with children with MR and language delays matched for developmental level, only children with autism show deficits in joint attention.
- One of the DSM-IV criteria for autism: “a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by a lack of showing, bringing, or pointing out objects of interest)”



# JOINT ATTENTION AND AUTISM

- Joint attention may be important to the development of language because...
  - Language is learned in the context of joint attention interactions
  - Early in the 2nd year, when children hear a novel word, they look at the adult and then at the object the adult is looking at
- If a child with autism doesn't do this, he may not learn from this interaction at all or may look at the wrong object.



# STRATEGIES FOR TEACHING JOINT ATTENTION

- One study from the University of California, San Diego (Whelan and Schreibman (2003), used behavioral approaches to teaching joint attention, including:
  - Coordinated gaze shifting (When a child looked at a new toy, he had to keep looking at it to keep the toy.) The child was prompted by putting his hands on the toy and then prompts were faded.
  - Declarative pointing (The child pointed at a photo or object. Physical prompting was used. If the child pointed within a time limit, he was allowed to keep using the toy.)
- Children in the study generally improved in joint attending but improvements in *initiating* the joint attention were mixed.



# STRATEGIES FOR TEACHING JOINT ATTENTION

From Jones and Carr:

- A firm research base for effective strategies is limited but here are some procedures used in the literature:
  - Introducing silly, out of place events/objects into normal routines to evoke a response
  - Putting high preference item and face in line of vision to evoke gaze responses
  - Teaching child to point to/show something to someone else and say, “look”
- Limitation: These procedures teach a response, but do not necessarily teach the child that social interactions are interesting (reinforcing)



# STRATEGIES FOR TEACHING JOINT ATTENTION

From Jones and Carr:

- Establishing the presence of adults as generalized reinforcers
  - Adult presents a variety of highly preferred items repeatedly over time
  - Once the child seeks proximity to the adult, the adult engages the child
- Using child choice
  - When teaching joint attention, let child choose items to be used in teaching
  - Use items that are preferred and engaging (e.g., toys that move, light up)
  - Use a variety of items and incorporate novel items



# STRATEGIES FOR TEACHING JOINT ATTENTION

From Jones and Carr:

- Natural consequences
  - Natural consequence for joint attention initiation is a social interaction about the object
  - Deliver enthusiastic, high energy attention (e.g., loud “wow,” funny face, high-volume tickles)
- Activity variety: Use the first/then approach
  - Interspersing easy tasks with difficult tasks has been shown to increase acquisition of difficult tasks
  - They recommend using play with the preferred item as the easy task



# STRATEGIES FOR TEACHING JOINT ATTENTION

These are from *Do-Watch-Listen-Say* by Quill:

- Call the child's name. Pick up the item he is playing with, put in front of his face, then lead it to your face. Look for visual tracking and a transfer of his gaze to you.
- Call the child's name. Take the child's hands and touch them to your face.



# STRATEGIES FOR TEACHING JOINT ATTENTION

- Call the child's name. Make a stimulating noise (finger snap, clap, etc.). When child turns to the noise, catch his gaze and reinforce.
- Use cause and effect. Call his name during a table play activity (puzzle or pegboard). When he looks up, engage him in a reinforcing play (tickling). Re-direct back to the game, then interrupt intermittently. The real game is getting his eye gaze. Praise him for looking at you.
- Play simple Peekaboo games, using his name. (“ I see \_\_\_\_.”)



# STRATEGIES FOR TEACHING JOINT ATTENTION

- Play Hide and Seek games. Use the child's name. ("Where is \_\_\_\_\_?")
- Use stop and go games. Use a simple gross motor activity like hopping, crawling, or marching. Call the child's name. Have the child stop the activity and look at you.
- Reinforce the child for stopping and looking, then direct him back to the motor activity.



# STRATEGIES FOR TEACHING JOINT ATTENTION

- Move your finger from the child's face to the object with the direction, "Look."
- Use a laser pointer or flashlight to direct attention to target objects.
- Move your finger, and lead the child's point to the object by placing your hand over the child's. Use an enthusiastic tone to label the object.



# STRATEGIES FOR TEACHING JOINT ATTENTION

- Have an object make physical contact with the child. Use tickles, a toy plane flying into the child's stomach, or an "itsy bitsy spider" climbing up his leg." Play "I Spy" by laying out motivating objects. Take turns pointing out what you see. If necessary, take the child's turn and prompt.
- Attach a silly noise to an object by always modeling it with the object. ("Brrrmmm for a car.")



# STRATEGIES FOR TEACHING (AND BUILDING ON) JOINT ATTENTION

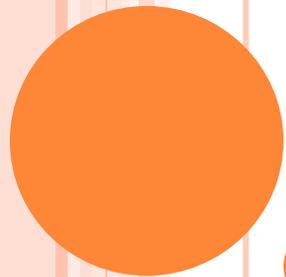
- Slowly increase the materials for a given task. For example, start by building with 5 blocks, then increase to 10.
- Use sequence boards to add to the number of steps within an activity.
- Increase the number of turns in a turn-taking task.
- Use the “first/then” visual tool.



# STRATEGIES FOR TEACHING JOINT ATTENTION

- During snack time, have the child share his snack.
- Have the child hand you an object so you can see it, then pass it back.
- Create simple treasure hunt games. When the child finds a hidden object, prompt him to give it to a sibling or playmate.
- Pass a book back and forth when reading aloud.





## **ANY QUESTIONS?**

**We will take a few minutes to allow you to submit questions.**



# IMITATION

The next skill we will consider is imitation.

- You should see the relationship between imitation and joint attention as well as the relationship they both have to play.
- These three skills are so interconnected that in typically developing children, it may be difficult to tell where one skill ends and another begins. For young children with autism, you will likely need to address all of them in order to have success with any of them.



# WHAT IS IMITATION AND WHY IS IT SO IMPORTANT?

## im·i·tate

- **1** : to follow as a pattern, model, or example
- **2** : to be or appear like
- **3** : to produce a copy of
- We will emphasize the first two parts of the definition: *Following an example, model or pattern; and appearing like something else.*



# IMITATION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Children with autism/PDD often have very poor imitation skills, which in turn have an impact on their acquisition of other important skills.
- Quill, in *Do-Watch-Listen-Say* discusses imitation deficits, which, along with atypical play behaviors, are “the most important diagnostic indices of autism (p. 7).”
- Quill: “Nonverbal social-communicative and imitation skills develop quickly and naturally in typically developing children during the first 2 years of life and lay the foundation for later social, communication, and emotional development.”



# IMITATION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Imitation is an important milestone in the development of cognitive and social skills.
- It plays a critical role in the development of symbolic thought and social relationships.
- According to Quill and others, imitation is a critical skill for the emergence of symbolic play and is necessary for sustaining social interactions.
- It provides children with a sense of shared experiences and enhances self-awareness, also important for language development.



# IMITATION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Infants first show interest and motor responses when adults imitate them. The motivation to continue an interaction encourages the imitation exchanges. (This should give you ideas!!)
- During the first year of life, children progress from repeating motor and vocal actions within their repertoire to imitating novel actions.
- By 1 year of age, children imitate social acts such as waving “bye-bye” and object use like drinking from an empty cup.
- By age 2, children can imitate a sequence of novel actions and can engage in *deferred imitation* (They repeat actions observed in others at an earlier time.)



# IMITATION: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Research on imitation skills in young children with autism has consistently shown impairments in both verbal and motor imitations relative to other cognitive tasks.
- Children with autism showed some interest when adults imitated their behaviors, especially with toy play. (This should give you some ideas!!)
- The imitation delays of children with autism correlate with restricted levels of social relatedness, play, and language.
- Children with autism have particular limitations in imitating play actions, especially multistep pretend play actions, and did not demonstrate an understanding of their meaning.



# STRATEGIES FOR TEACHING IMITATION

- There are several ways to teach imitation skills.
- Many of the strategies for teaching motor imitations are based on discrete trials. A “discrete” trial is a sequence that has a specific beginning and end (i.e., a “stand alone” event).
- When skills are taught this way, there are steps in the teaching trial:
  - A beginning (an antecedent, usually an instruction like “Do this.” or “Clap your hands.”)
  - A middle, in which the child does something (a behavior like clapping his hands.)
  - A consequence; usually reinforcement from the adult (“Great clapping!!” followed by a tickle)



# EXAMPLES OF IMITATION SKILLS IN A BEHAVIORAL (DISCRETE TRIAL) APPROACH

- In the book *Behavioral Interventions for Young Children with Autism* by Maurice, the “Beginning Curriculum Guide” lists a sequence of skills that children can be taught.
- First are attending skills, then imitation skills, including:
  - Imitates gross motor movement
  - Imitates actions with objects
  - Imitates fine motor movements
  - Imitates oral motor movements.
- In the “Intermediate Curriculum Guide,” additional imitation skills are listed, including imitating sequenced gross motor movements and imitating block patterns. In the advanced guide, skills include imitating verbal responses and peer play.



# STRATEGIES FOR TEACHING IMITATION

- The next few slides are from *Do-Watch-Listen-Say* and have some basic suggestions for teaching imitation skills.
- In addition, we will watch two video clips that show two different approaches to teaching motor imitations.



## IMITATING ACTIONS WITH A TOY:

- Give the child a toy and sit across from him with an identical toy. Model a single action with the toy, then prompt him to imitate with his toy.
- Model a single play action and stop with a sharp noise. For example, roll a car and stop with a screech.
- Do an action to a child, then imitate with a toy. Pass the toy to the child for imitation. (Kiss the child, then a baby doll, then hand the doll to the child for a kiss.)



## IMITATE A SINGLE BODY ACTION:

- Play a game in which the child must imitate a single body action to receive a desired response, such as tickles or squeezes.
- Pretend to be animals and have the child imitate one body action for each animal.
- Play “chase.” Chase and catch the child and have him imitate an action to get free.



## IMITATE A SEQUENCE OF TWO ACTIONS:

- Engage the child with a familiar toy. Once the child has repeatedly demonstrated a play action with the toy, add a second action.
- Model a two-step sequence and attach simple verbal directions to cue the target action. (“First yawn, then go to sleep.” “Jump up; jump down.”)



# IMITATE A SEQUENCE OF THREE OF MORE ACTIONS:

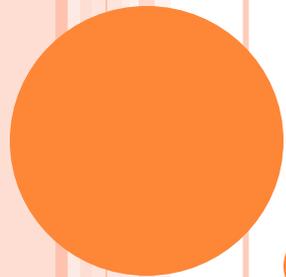
- Use the First/Then board to add another step to a sequence.
- Create flashcards with individual body actions. Set out two cards and require the child to do both actions.
- Use a schedule board to map a sequence of play actions. Show the visual before each step of the sequence.



# IMITATION: VIDEO EXAMPLES

- You will now see two video clips, both available on YouTube..
- The first clip shows a discrete trial, behavioral approach to teaching imitation of motor movements.
- The second clip shows a child with autism imitating motor movements. In this clip the child is watching television with his sister and imitating the movements on the TV and done by his sister.
- You can teach imitation in a variety of ways, matching the child's learning style and the family's goals. You need to know the child and his/her family.





## **ANY QUESTIONS?**

**We will take a few minutes to allow you to submit questions.**



## QUICK REVIEW

Which of these statements about imitation skills for young children with an ASD is/are true?

- A. You should always using a discrete trial approach.
- B. You should teach a complete series of motor movements.
- C. It's okay to vary your approaches to fit the child and the family.
- D. All of the above.



# PLAY: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- In last week's webinar, we focused on play routines. We looked at play as a perfect match for teaching skills as well as a natural activity of young children.
- We will discuss play again this week, but we will emphasize the role of play in social-communicative development.
- The focus this time is not on how to structure play routines that include these specific skills: Joint attention, imitation, and pretend play (if possible).



# PLAY: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- For young children, mastery of social skills (social competence) is often determined by the quality of their play skills.
- Children's play reflects an understanding of their social experiences: Children explore how to use toys or materials and they reenact personal experiences.
- The play of young children with autism reflects their social mastery. For example, when they engage in repetitive play, they demonstrate a limited understanding of creative play, especially when they do the same thing the same way time after time.



# PLAY: WHAT IS IT AND WHY IS IT SO IMPORTANT?

- Typically developing children explore toys and materials, watch and imitate others, and interact verbally and nonverbally with peers.
- These components of play occur simultaneously and flexibly. Their play is very complex.
- In addition, typically developing young children who engage in social play are also perspective taking, turn taking, and demonstrating creativity.
- Young children with autism have limited skills in these areas.



# STRATEGIES FOR TEACHING PLAY SKILLS

- We have emphasized teaching play skills through routines. In the last webinar, you were provided a planning form as well as examples of play activities for young children.
- As you teach young children with autism to play, you can think of a logical hierarchy of skills that might help you stay on track. For example:
  - Start with parallel play (free choice v. selected materials)
  - Move to a partner or group activity
  - Begin activities that *require* turn taking
  - Then use activities that require sharing
  - Finally, cooperative play...in which materials are shared, the child must respond nonverbally, and there is a common goal.



# ACTIVITY

The activity this week is to design a play routine; but not any old play routine. There are required components for this routine.

You may work with a partner and/or group on this activity and then you should share with the larger group.

To complete the activity, you will find a posted form, “Play Routine Addressing Joint Attention and Imitation.” If possible, also include as part of the routine, some pretend play. As Emeril says, “Bump it up a notch!!”



**Play Routine Addressing Joint Attention and Imitation (with Pretend Play if Possible)**

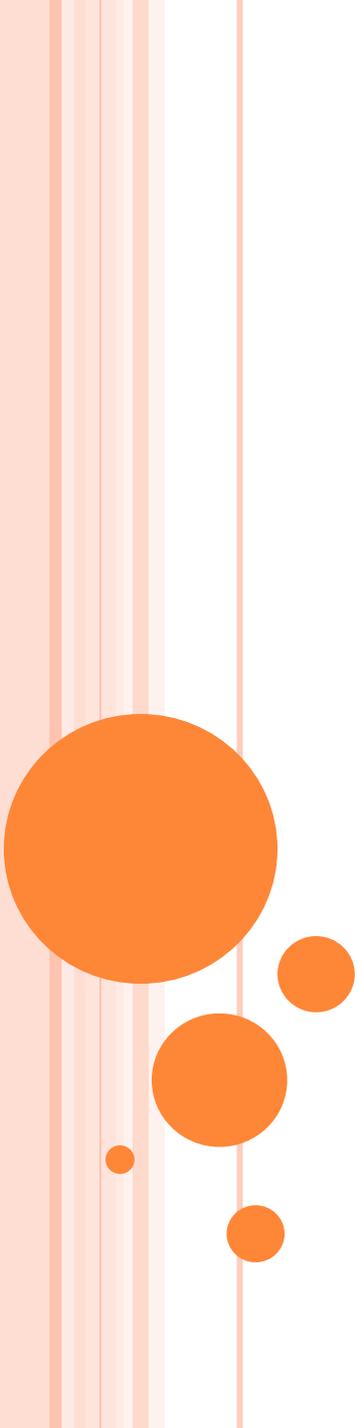
Name of Routine: \_\_\_\_\_

Steps in the Routine:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

<p><b>Materials:</b></p>    <p><b>Environmental Structure and Orientation:</b></p>	<p><b>How will you engage the child and maintain joint attention?</b></p>
<p><b>What is one physical or verbal action that the child will imitate during the play routine?</b></p>	<p><b>**Can you think of a pretend play or make believe activity to include in the play routine? (e.g., "The child will pretend.....")</b></p>





## SHARING YOUR PLAY ROUTINES

We probably will not have time to submit and read all ideas. When you submit your idea, please tell what the routine is and then pick one area (joint attention, imitation, or pretend play) and tell how you will address that skill.

# SUMMARY

*In this webinar, we have discussed three key skills for young children with autism: Joint attention, imitation, and play.*

- We discussed the definitions of the terms joint attention and imitation.
- We focused on the importance of these three skills, as well as the ways that young children with autism and typically developing children differ in their development.
- We discussed several strategies for teaching the skills.

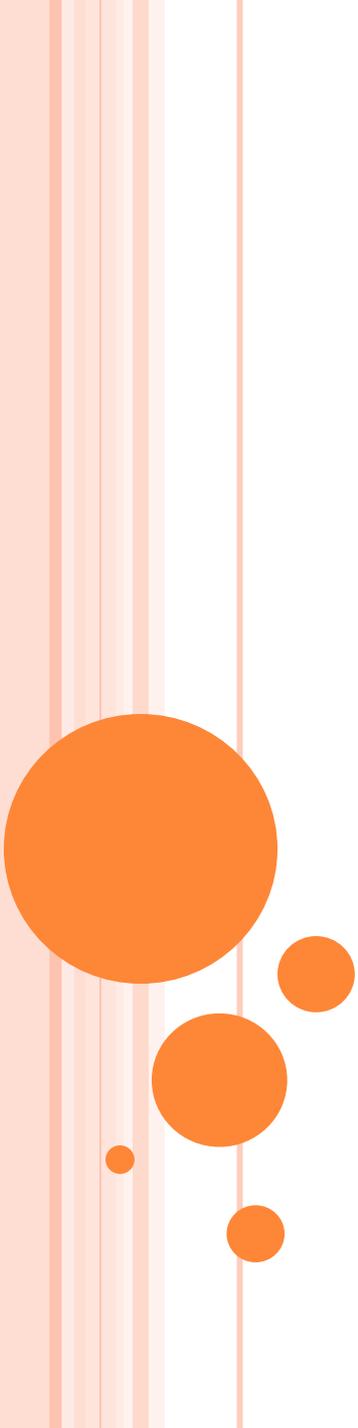


# SOME RESOURCES FOR THIS WEBINAR

Here are some resources referenced in this webinar:

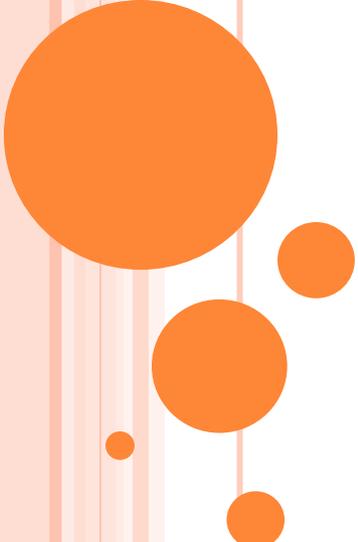
- *Do-Watch-Listen-Say* by Quill. (Brookes Publishing)
- *Behavioral Intervention for Young Children with Autism* by Maurice (PRO-ED)





## **ANY FINAL QUESTIONS?**

**We will take a few minutes to allow you to submit questions.**



## LOOKING AHEAD

Our last webinar will be on Tuesday, August 24<sup>th</sup>  
at 9:00 a.m.

The topic will be *Current Issues and Research*