

Promoting Functional Communication in Children with ASD: Thinking within & outside the ABA paradigm

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Which best describes you?

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Objectives

1. Demonstrate an understanding of evidence based practices for intervention in children with autism spectrum disorders
2. Demonstrate an understanding of different intervention approaches used in children with ASD (ABA, Contemporary ABA, Naturalistic interventions)
3. Identify functional relevant goals within and outside the ABA paradigm with clinical case examples.
4. Identify strategies to promote functional communication (communicative intent, communicative contexts, communication partners)



Evidence-based practices, ASHA guidelines

- What is EBP?



Figure 1. Evidence-based practices. From Evidence-based practices by ASHA, n.d. [EBP Representation from ASHA](#)



EBP-Defined

- **Clinical Expertise**
 - Derived from your trainings and clinical experiences
- **Client/Caregiver Perspective**
 - Client and family at the center of your treatment. Expectations based on priorities, values, cultural considerations.
- **External/Internal Scientific Evidence**
 - Scientific evidence (external)
 - Data from clinical observations and assessments (internal)
- What does this mean to me as a provider or as a parent?

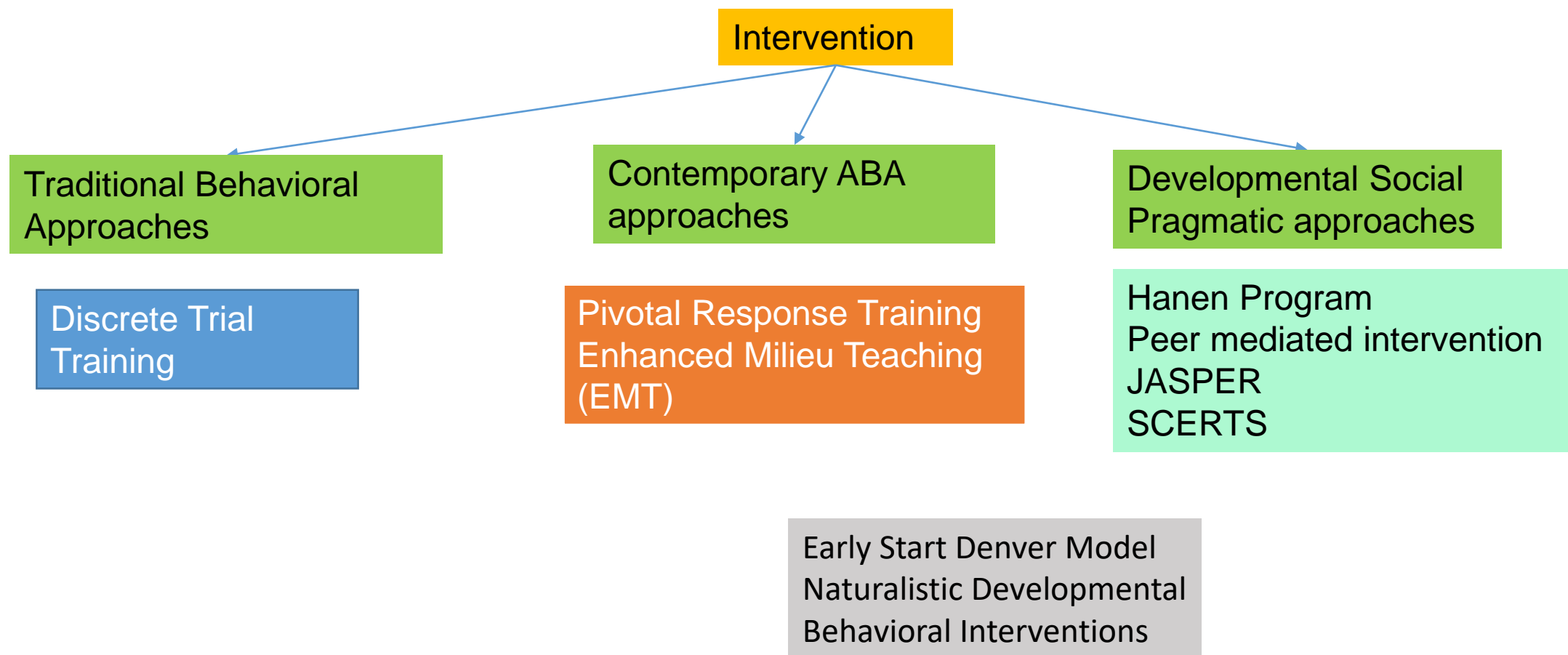


EBP-Process

- Informed decisions are the hallmark of any effective intervention.
- How do clinicians or parents keep track of all the evidence and changing trends?
 - What is your question or research inquiry?
 - What approaches are you trying to compare?
 - What evidence is available?
 - Assess and evaluate the evidence.
 - Make informed decision.
- ASHA has a helpful section dedicated for all EBP needs and outlines the EBP process
[EBP Process](#)
- Evidence- across all aspects of the EBP triangle. Key is to look for systematic reviews and clinical practice guidelines.



EBP in intervention for individuals with ASD



Traditional Behavioristic Approaches (DTT)

- Discrete Trial Training (DTT): Based on the antecedent-behavior-consequence paradigm (Lovaas, 1977).
- Why does it work?
 - Adult-directed (control of variables)
 - Structured format
 - Several repetitions (mass trials for learning)
 - One-on-one interaction
 - Task broken down into discrete steps.



DTT Example for Pronouns

Point to “He is drinking”



Point to “She is drinking”



Strengths of DTT:

Children with ASD love structure

- DTT is **structured**, routine-based (ABC)
- **Discrete & concrete** information (e.g. *he* vs. *she*)
- **Sequential learning** (shaping behaviors)
 - 1-step directions, then 2-step directions
 - Matching objects-objects, objects to pictures, pictures to pictures.
- **Several trials** to learn target behavior/response
- Fairly **consistent administration** across service providers
- **Data driven** (clear criteria for mastery levels)



Challenges of DTT

- **Lack of generalization** (across conversational partners and conversational contexts).
- **Limited flexibility of language** (lack of spontaneity)

Prizant et al. 2004, Schreibman et al., 2015

- **But, more importantly:**
 - Social communication is best learnt in **NATURAL** social contexts. **DTT is decontextualized, unnatural**
 - **Conversational partners** and **social contexts** play a **HUGE** role in acquiring essential social communication skills in children with ASD



Contemporary ABA

- PRT, Milieu teaching target specific target behaviors in **semi-structured contexts**
- **Child-centered** mostly, but environment/activities engineered for communicative opportunities.



Strengths of Contemporary ABA

- **Child-Centered**, some environmental control by adult
- **Motivating** for child
- **Natural consequences**/reinforcements
- **Increase intentional communication** (requesting, turn-taking, asking & responding to questions)

Koegel et al.(1987); Frost & Bondy (2002); Yoder & Warren (2002)



Challenges of Contemporary ABA

- **Planned teaching moments** only during specific periods of the day
- Certain **pivotal behaviors targeted** & responses recorded-less focus on multi-modal communication
- Less focus on developing **relationships, socio-emotional growth**

Prizant et al. (2004)



Developmental Social Pragmatic Approaches (DSP): Strengths

- Teaching in **naturalistic** contexts
- Focus on **communicative intent/function**
- **Multiple opportunities** throughout the day across conversational partners and conversational contexts
- Based on **language development** and **socio-emotional development**
- **Facilitative-interactive** style; hence more spontaneity



Challenges of **Conventional** DSP approaches

- Harder to gain **consistency** across conversational partners.
- **More evidence** required to validate the plethora of DSP models.

Ingersoll et.al (2012)



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The intervention approach I most commonly use with my child,
patient, or student is based on:

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The ABA dilemma

- **Research for ABA based interventions:**

- Structured format
- Strong empirical evidence
- Prescriptive process

Tavers (2014)

- **THEN: Why is there so much debate?**

- Lack of generalization
- Lack of spontaneity in language
- Less emphasis on communicative intent, conversational contexts and conversational partners

Prizant et al. (2004)

- **SO: How do these factors impact intervention?**

- Goal selection
- Strategies to target goals
- Generalization

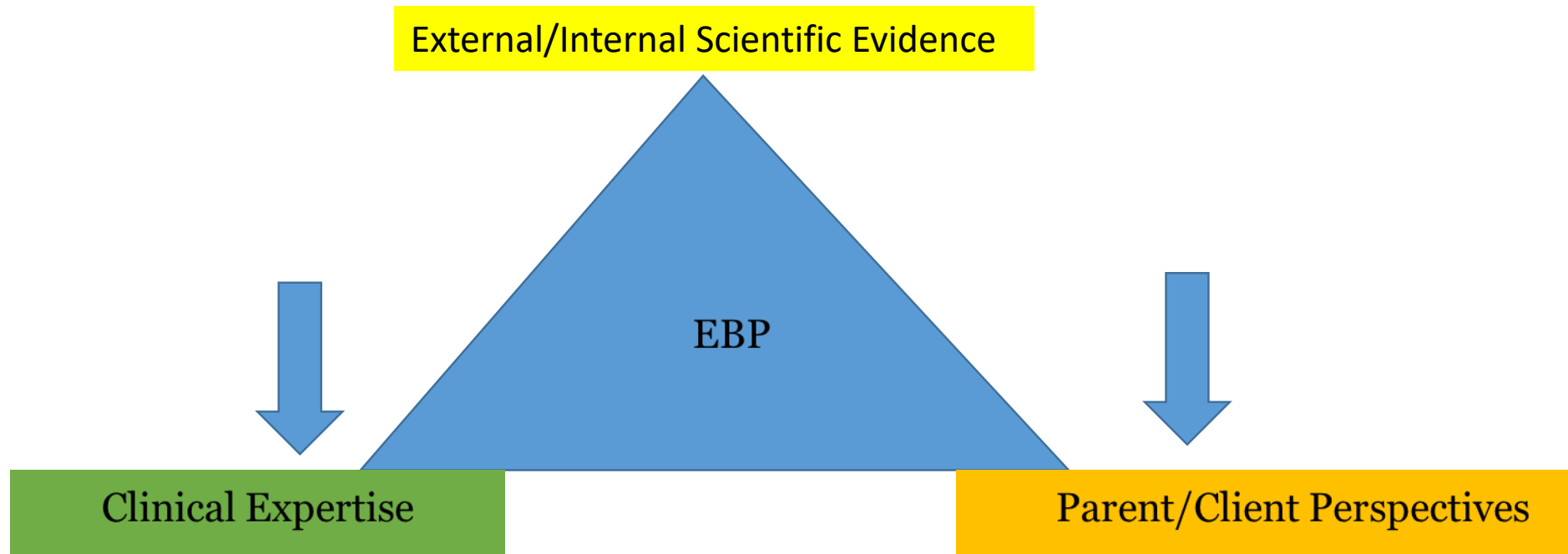


Importance of functionally relevant goals

- **Social deficits** are hallmark symptoms of ASD
- **Parents, caregivers, teachers** want children with ASD to:
 - Request
 - Protest
 - Comment
 - Ask questions, provide information
 - Shared enjoyment and engagement in interaction
- Are ABA-based interventions **targeting goals** that are **functional/meaningful** for the child & family?



Revisit the EBP Triangle



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What words come into your mind when you think of ABA approaches?

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Challenges in ABA-based interventions for functional communication

- Tendency to follow the PRESCRIBED goals & goal sequence
- Acquisition Goals vs. Maintenance Goals
- Frequency of opportunities to practice DTT learned behavior
 - Vary context, vary communication partner
- Contextualizing ABA goals in child's routine



Functionally Relevant goals

- Goals that are meaningful for the child and family
- Goals that result in outcomes across developmental domains.
- Goals that are embedded within the intervention approach and provide multiple opportunities for the child to learn



Functionally Relevant Goals within & outside ABA Paradigm: Clinical Case Examples

Case scenario 1: *Child with ASD is aversive to food and anything related to food, but loves to spin and run. Limited receptive & expressive language.*

- **DTT:**

(a) Identify **common objects** in pictures:

- Plate/spoon versus ball/car

(b) Identify **common actions** in pictures

- Eating/drinking versus running/spinning

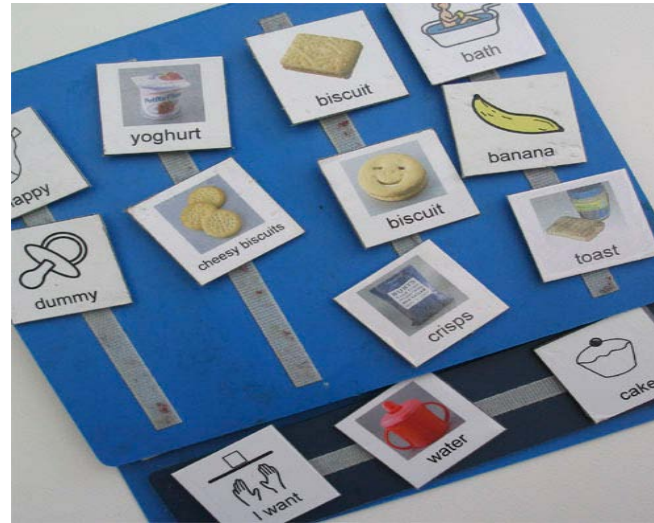
- **PRT:**

- Select toys or activities that incorporate common actions but related to food (spin the pizza bread)
-intersperse motivating behaviors with target behaviors



Functionally relevant goals contd.

- **Case Scenario 2:** Child has a large receptive language vocabulary and loves books. He cannot tell his mom that he is hungry (*Parent perspective*)
 - **PECS:**
 - Request preferred food item



Case Scenario 2

- **DTT**: Difficult to teach abstract terms:
 - Incorporate principles of sequential learning
 - First: Eating versus drinking
 - Then: Hungry versus thirsty



Hungry



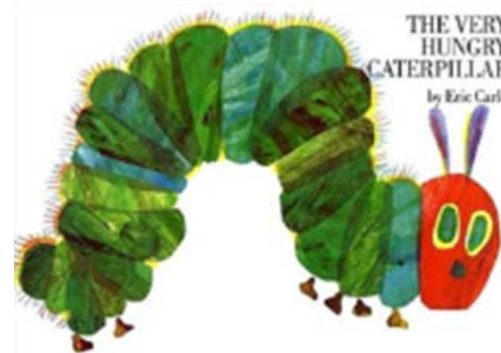
Thirsty



Case Scenario 2: Functionally relevant goals contd.

NDBI:

- Teach concept through contextualized learning
 - Pivotal behaviors: Motivation; Child Initiation; Response to Multiple Cues; Self-Regulation
- (a) Motivation & Child Initiation: Book activity (select hunger themed books—*The Very Hungry Caterpillar*)
- (b) Response to multiple cues (laminated materials around the room, identify food items in scavenger hunt)
- Behaviors indirectly targeted (joint attention, following 1-step directions, identify objects, labeling, relation between hungry & eating)
- (c) Self-regulation
- Wait for turn to get object
 - Block access to preferred item



Book example: Bringing it to life



Stuffed animals in strategic locations



Case Scenario 3: Functionally relevant goals

Child has huge anxiety, forces himself to vomit when he enters therapy room, cries throughout PRT play time and circle time. Mom informs you that he hates table tasks, hence DTT will be a struggle. You as a clinician identify that he stops crying only when you sing.

DTT: How do you as a clinician use that information for DTT?

- **Transition song** to prepare (typical ABA paradigm)
- Identify **highly reinforcing toys** that are motivating for him (typical DTT paradigm procedure, PRT procedure)
- **Deliver instruction**—how and without triggering meltdown?
 - DTT instruction sung (atypical DTT paradigm)
 - Use songs that target child specific DTT goals (motor imitation, follow directions—atypical DTT paradigm)
 - Slowly move to verbal delivery of DTT instruction

What was the functionally relevant goal?



Case Scenario 4: Functionally relevant goals

- Child with ASD—negative experience in a school setting (family history of bad school experience for older sibling), hates coming to school, hates paper-based tasks (pictures, books), limited receptive and expressive language. Only thing child loves is “cars” and sand play
- DTT is a definite no-no; but, DTT is important to teach target goal
 - Out of therapy room contexts (sand play, transitioning to room using scooter, scavenger hunt)—PRT, DSP approaches
 - Cars used as reinforcements (traditional ABA paradigms)



Case scenario 4 contd.

- Child's interest used to identify books & plan activities (car-related books, PRT)
- Car races-alternate to traditional DTT table task (atypical DTT)



Find big and small cars



Car races as an alternative way to do a DTT task.



Sorting task at table







Strategies to Promote Functional Communication

- **Communication Contexts:**
 - Settings: School, Home, Community
 - Activities: Play, Reading, Conversations
- **Communication Partners:**
 - Parents, caregivers, extended family
 - Educators (teachers, SLPs, OTs)
 - Peers
- **Embedded learning opportunities** throughout the day
 - Target goals throughout the day
 - Child's daily routines (arriving at school, recess, snack time)

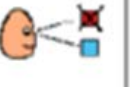


Communication Contexts: Play



1.

make	face	make	potato head
			






2.

Find colors



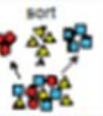
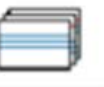
3.

read	cars
	

4.

find	big	small	car	fruit
				

5.

car racing	sort	cards
		

Visual schedule at play



Find chair based on color cards



Communication Contexts: Play at School-Types of Play



Mouthing



Stacking



Communication Contexts: Play at School/Home



Functional Play, Pretend Play



Role play



Communication Contexts: Play at School & Home

- Select toys motivating for **YOUR** child!
- What all can I do with this toy? (play affordances)



Assigned Play areas and Communicative Temptations

- Designated play areas and containers for toys.
- Place items in clear plastic bags or closed containers, away from access (communicative temptations)



Communication Contexts: Play at Home

- Toys not ALWAYS needed to play with your child
 - Tickles, chase games, running races, throw/catch ball
- The key is **HOW** do you play with your child?
 - Face to face with your child--Eye contact is IMPORTANT!
 - Exaggerated facial expressions—make a BIG deal of each play action.
 - Model behavior, provide support, and with time fade prompt
 - Say and do the target behavior the same ALL the time.
 - PAUSE and WAIT!



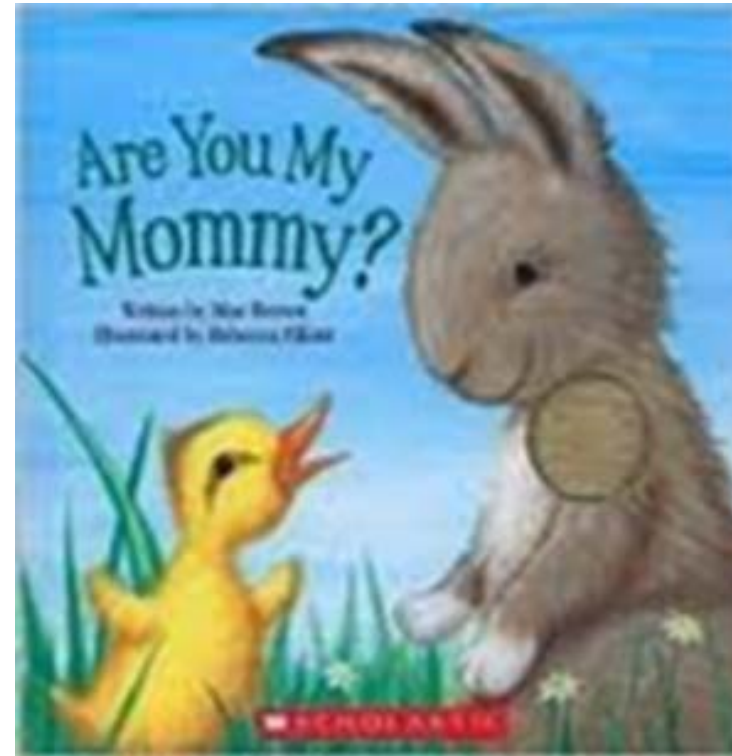
Communication Contexts: Shared Reading Time (School & Home)

- How do you sit?



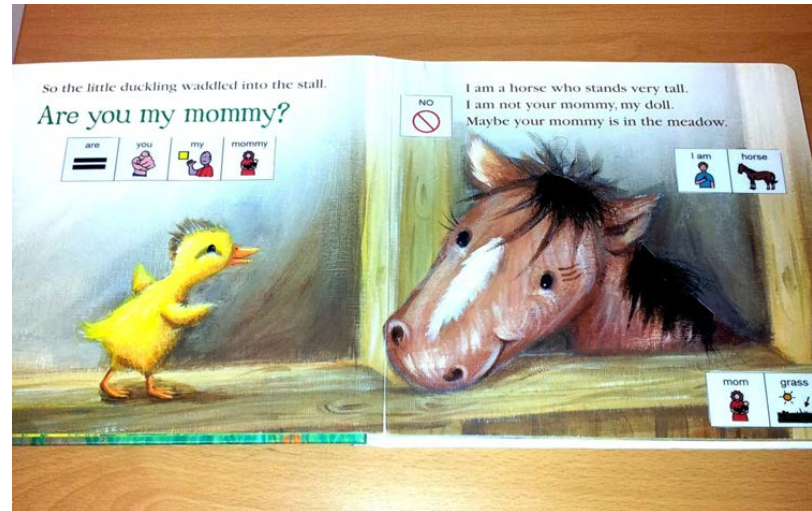
Communication Contexts: Shared Reading Time (Book Selection)

- Books that are repetitive, use textures



Communication Contexts: Shared Reading Time (Adapting texts)

- Modify language in books to target goals



- Make a routine
 - Introduce title of book
 - Have your child request to “open the book”, “turn page”
 - Take turns reading the book
 - Use short phrases and repetitive lines



Communication Contexts: Conversations at Home & School

- Be your child's translator
- Expand on child's language.
- Use of social stories, video modeling, role play
- Use of AACs as an alternative or augmentative communication



PECS



AACs




Communication Contexts: Conversations at School

- Play groups
- Focused language stimulation groups (Language Buddy)



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Pick one strategy you will incorporate in your interventions or interactions with your child:

 Start presenting to display the poll results on this slide.

Summary

- **Individualized** intervention to support the child's learning in his/her environment
- Capture the “teachable” moment
- Do NOT remove the child from the social context—**SUPPORT** instead.
- **Multiple opportunities** to learn target goals
- **THINK** outside the box...think from the child's perspective
- **COLLABORATION** is KEY!



References

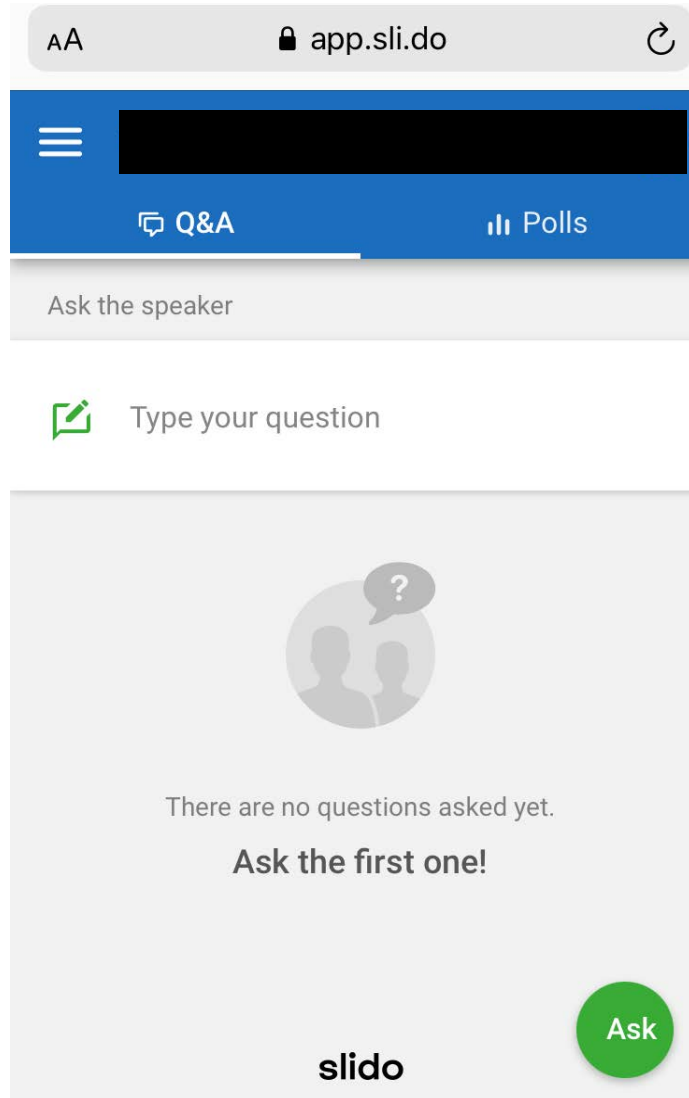
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Question & Answer (Q&A) Segment.

Instructions: Toggle over to the Q&A section in Slido to enter questions.

All questions are moderated.



The screenshot shows the Slido mobile application interface. At the top, the browser address bar displays 'app.sli.do'. Below this is a blue navigation bar with a hamburger menu icon on the left, a blacked-out profile picture, and two tabs: 'Q&A' (selected) and 'Polls'. Underneath the navigation bar is a light gray input area with the text 'Ask the speaker'. Below that is a green pencil icon followed by the text 'Type your question'. The main content area is light gray and features a circular icon with two silhouettes and a question mark. Below the icon, the text reads 'There are no questions asked yet.' and 'Ask the first one!'. At the bottom left is the 'slido' logo, and at the bottom right is a green circular button with the word 'Ask' in white.



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Audience Q&A Session

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