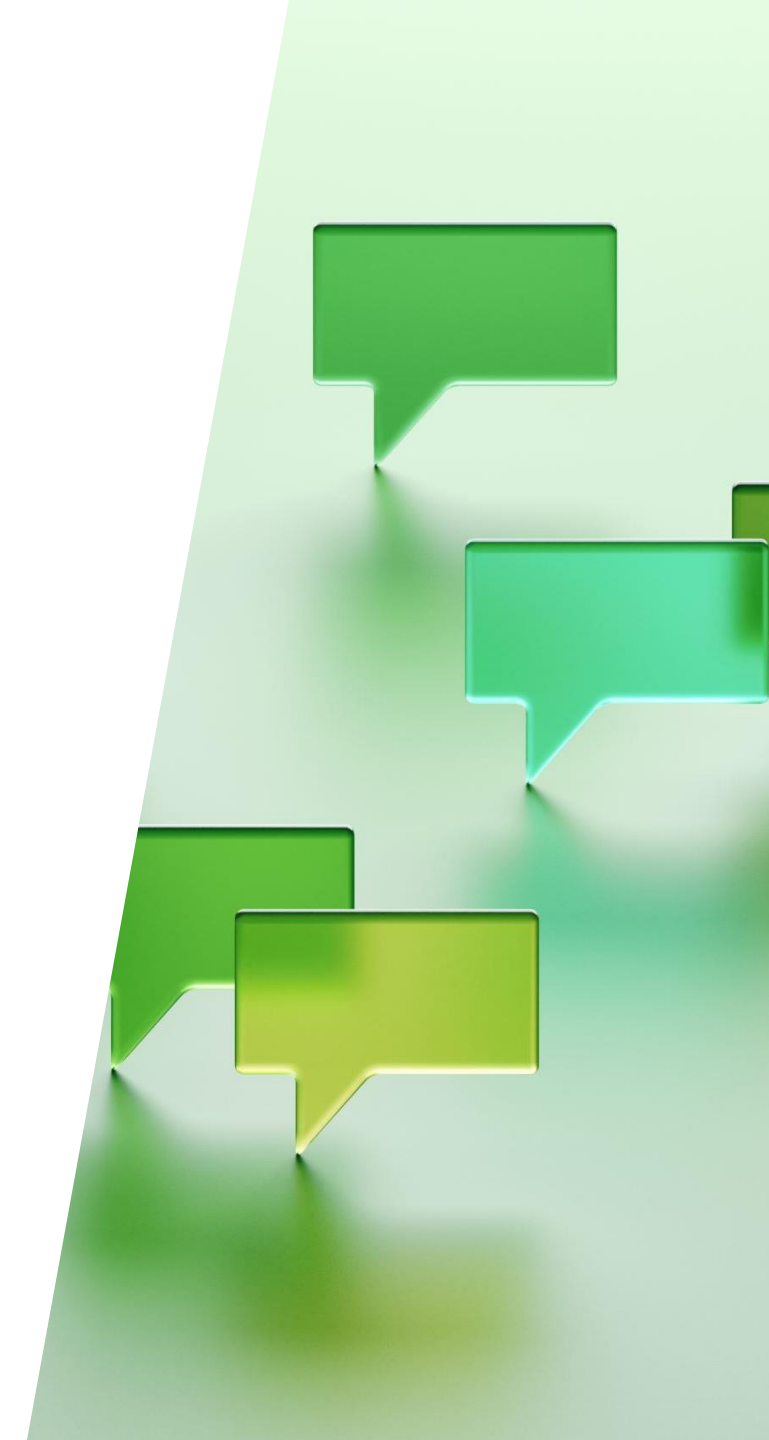Nancy Brady

April 12, 2024

Challenges to Communication Assessment and Treatment in Inclusive Settings

An Ecological Approach to Assessing and Treating Communication

- Why focus on communication in inclusive settings?

- Scenario: You are a new clinician/teacher and you need to help a child communicate better across contexts/environments. What do you need to know and how are you going to find out?

Who are we talking about?

- Individuals whose significant disabilities make even the most basic interactions challenging.
    - Individuals with autism and significant developmental delays
    - Individuals with sensory impairments such as deafblindness
    - Individuals with significant intellectual impairments/delays
    - Individuals with severe physical impairments such as those with CP who may also have significant intellectual impairments
    - Combinations of the above

Scenario: You are a new clinician/teacher and you need to help a child communicate better across contexts/environments. What do you need to know and how are you going to find out?

- Watch the following videos and then discuss
  - The kids- what grade age do you think this is?
  - What did you think was good instruction?
  - What could be improved?
  - What communication opportunities did you observe?
- https://www.youtube.com/watch?v=Q7fRemhUKsE&list=PLka2GCtEAJ1oKle8Sx-rOMGcfM1g2BGHI
- https://www.youtube.com/watch?v=3VMz06iVzqs

What should assessment and intervention focus on?

- What is the best combination of communication modes to communicate content?

- Content that is derived from participating in engaging activities in integrated inclusive settings
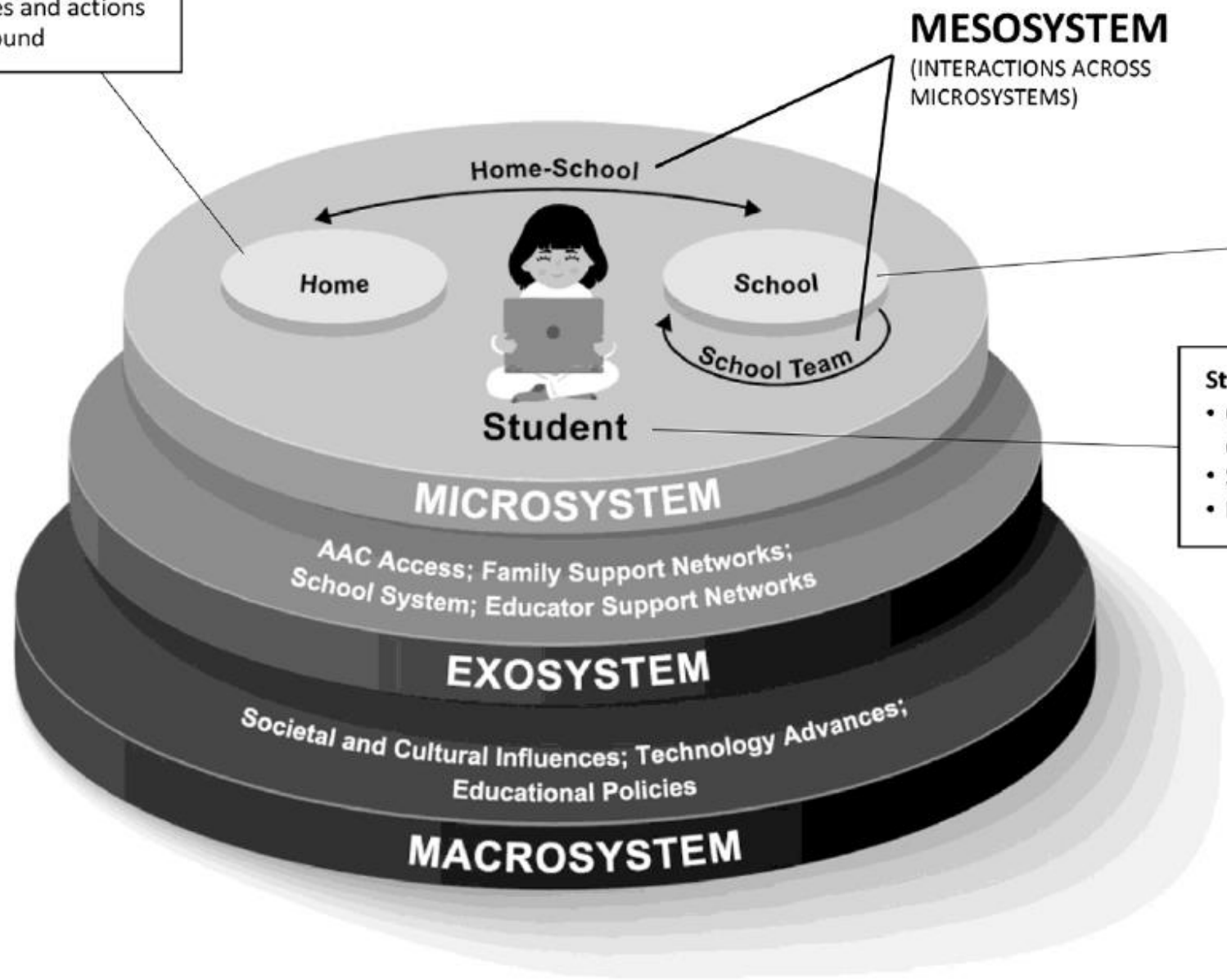
Ecological factors affecting communication

- Biggs, E. & Hacker, R. (2021). Ecological systems for students who use AAC: Stakeholders' views on factors impacting intervention and outcomes.

- What are factors actoss systems acting as challenges or facilitators to effective AAC intervention—or communication outcomes more broadly?

- Qualitative study of 19 parents and professionals.

Home factors
- Family attitudes and actions
- Family background

MESOSYSTEM
(INTERACTIONS ACROSS MICROSYSTEMS)

Home-School

School factors
- School staff (i.e., views about students; knowledge and skills; use of communication support strategies)
- Educational placement and inclusion
- Curriculum and instruction
- Peers

Home

School

School Team

Student

Student-related factors
- Communication system and communicative competence
- Support needs
- Individual differences

MICROSYSTEM

AAC Access; Family Support Networks; School System; Educator Support Networks

EXOSYSTEM

Societal and Cultural Influences; Technology Advances; Educational Policies

MACROSYSTEM

What are some examples of factors that *you* have experienced

Barriers?

Facilitators?

Barriers and solutions

- Simply helping students acquire technologies is not enough

- Educators, service providers and families need to partner together

- We need to bridge gaps between school and home with training, coaching and other supports

- Use strength-based approaches to working with families.
    - See family members as collaborative partners
    - Build trust, support and open communication

Facilitating a students belonging in the gen ed classroom

- Teacher behaviors. What are some skills that would be helpful in Gen Ed teachers?

- Feel comfortable initiating an interaction even when there is a strong possibility that a student might not respond

- Know how to mediate incorrect responses from students both with and without disabilities

- Know how to interact when a student with severe disabilities is not performing as desired

- Speak directly to the student --if the student fails to respond others may assist

- (Downing and Ryndak (2015). Integrating team expertise to support communication.)

Mary's Case: An illustration of interprofessional collaborative practice for a child with severe disabilities

- By Ogletree, Brady, Bruce, Dean, Romski, Sylvester & Westling (2017).

- A lifespan perspective

Mary's case main points

too much isolated planning and treatment by teachers and related service professionals occurred.

too much deference given by teachers and family members to related services professionals.

functioning interprofessionally will really require more interprofessional education—that is, disciplines learning from and with each other.

What are some possible solutions?

From Kuntz and Carter (2021). Effects of a collaborative planning and consultation framework to increase participation of students with severe disabilities in general education classes

- Student support plan meeting (~60 min. meeting)
  - 1. goals and roles, 2. share info on strengths , interests, present levels of academic performance and helpful strategies, 3. share expectations for participating in classroom routines
  - Quick Plan meetings- short weekly meetings based on upcoming lessons. Should include necessary supports, directions for paraprofessionals, adaptations such as enlarged or bold font print, visual supports for the content, simplifying the type of responses
  - Example from Kuntz dissertation

Which goals can be addressed in the context of the general education
(Guided by the General Educator)
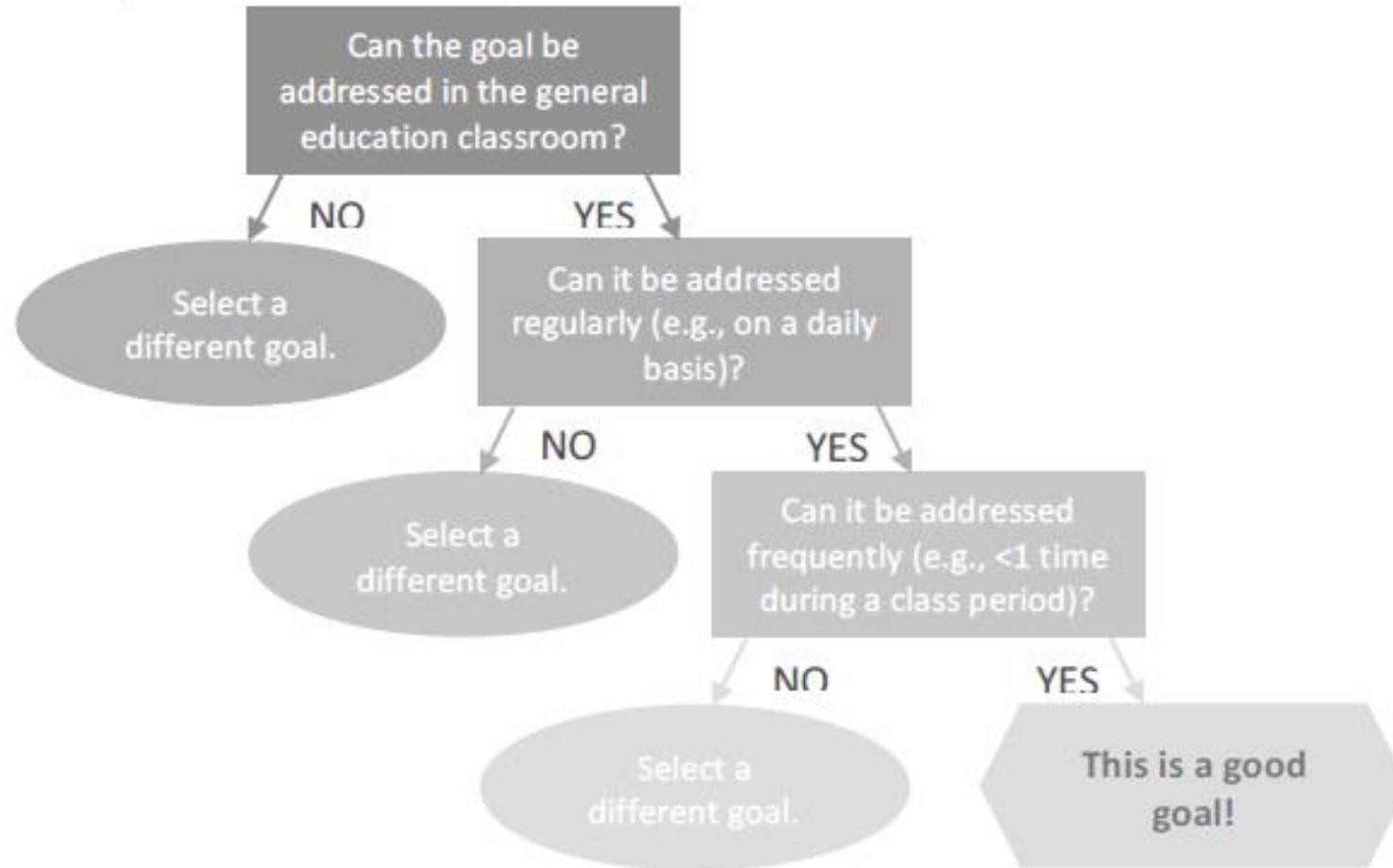
Target Goal

Monday

Routines *(Check the routines planned for today's class)*	Lesson Details/ Class Expectations *(List the specific activities and content covered in each routine)*	Adaptations/ Student Expectations *(List how the Lesson Details differ for the student, if at all)*	Materials for Student ▪ Text/Books? ▪ Worksheets? ▪ Equipment/Tech? ▪ Graphic Organizers?	Supports for Student ▪ Communication? ▪ Assistive Tech? ▪ Physical? ▪ Peers/Paras?
○ Whole Class Instruction ○ Whole Class Discussion ○ Small Group Work ○ Independent Work ○ Presentations ○ Lab Activities ○ Testing/Quiz				
Presenting the goal?	Reinforce or praise?	Correct or prompt?	Seat or group?	Behavior plan?

Tuesday

Routines *(Check the routines planned for today's class)*	Lesson Details/ Class Expectations *(List the specific activities and content covered in each routine)*	Adaptations/ Student Expectations *(List how the Lesson Details differ for the student, if at all)*	Materials for Student ▪ Text/Books? ▪ Worksheets? ▪ Equipment/Tech? ▪ Graphic Organizers?	Supports for Student ▪ Communication? ▪ Assistive Tech? ▪ Physical? ▪ Peers/Paras?

Activity- create a sample Quick Plan. Focus on roles and collaborations.

- Student: Elizabeth, an 8 year old second grade student with a diagnosis of Spinal Muscular Atrophy with Respiratory Distress. E is unable to independently move her upper or lower limbs or hold her head up and she is on a ventilator. She currently communicates via a loud clicking sound she produces with her tongue and facial expressions using her eyes and forehead and she uses a Tobidynavox and types out text-to-speech.

- Goal (picked from Downing & Ryndak chpt): To be actively involved in partner learning activities by following 80% of all directions in math and science for a 2-week period

Collaboration continued-Paraeducators

- Walker et al. (2021) Paraeducator-delivered Interventions for Students with Extensive Suport Needs in Inclusive School Settings: A Systematic Review

- Questions :(a) What are the participant and intervention characteristics among studies involving paraeducator-delivered interventions for students with ESN in inclusive school settings? (b) What is the overall quality of these studies? (c) What effect do paraeducator-delivered interventions have on student outcomes in inclusive settings? and (d) What effect does paraeducator training have on paraeducator-delivered interventions in inclusive settings?

- Working with paraeducators

From Yates et al. (2020) Working with Paraeducators: Tools and strategies for planning, performance feedback, and evaluation
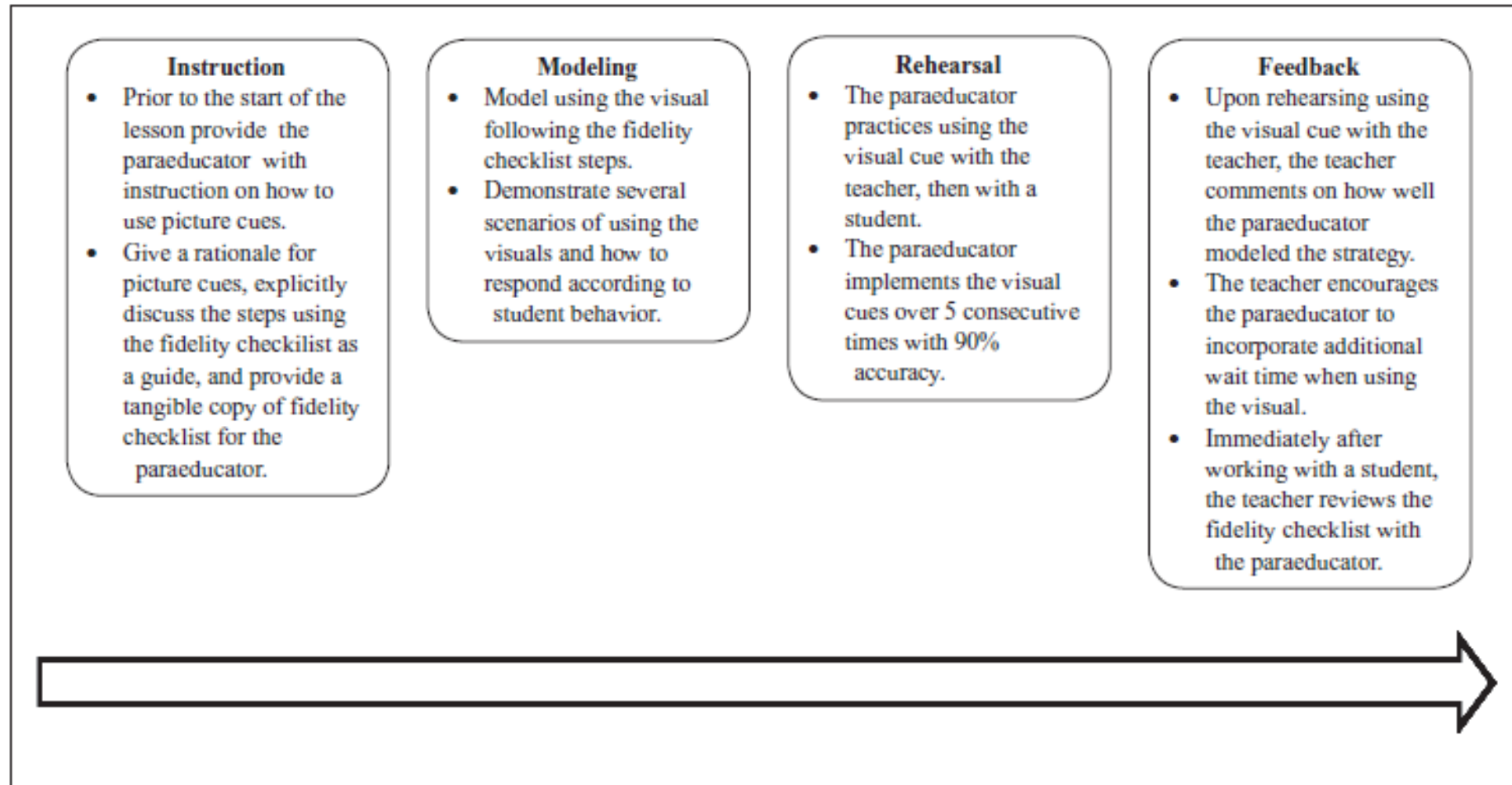
Instruction
- Prior to the start of the lesson provide the paraeducator with instruction on how to use picture cues.
- Give a rationale for picture cues, explicitly discuss the steps using the fidelity checkilist as a guide, and provide a tangible copy of fidelity checklist for the paraeducator.

Modeling
- Model using the visual following the fidelity checklist steps.
- Demonstrate several scenarios of using the visuals and how to respond according to student behavior.

Rehearsal
- The paraeducator practices using the visual cue with the teacher, then with a student.
- The paraeducator implements the visual cues over 5 consecutive times with 90% accuracy.

Feedback
- Upon rehearsing using the visual cue with the teacher, the teacher comments on how well the paraeducator modeled the strategy.
- The teacher encourages the paraeducator to incorporate additional wait time when using the visual.
- Immediately after working with a student, the teacher reviews the fidelity checklist with the paraeducator.

Figure 4. Steps, descriptions, and an example of behavioral skills training (BST).

How can assessment lead to more inclusive communication?

Assessment of Individual, Partners and Environment

- Individual/Student focus. Our goal is to discover how someone communicates.
- Ogletree, Wofford & Barton-Hulsey (2022). Practical approaches and socially valid assessment considerations
  - Core assumptions: identity framework and team commitment to interprofessionality
  - Pre-Assessment staffing
  - Caregiver interview
  - Caregiver/child interaction (recorded for later analysis)
  - Structured sampling
  - Formal assessment measure
  - Comprehension observations
  - Observations across settings
  - Post-assessment staffing

- Three methods described by Brady & Keen (2017)
  - Informant report
  - Direct observation
  - Structured observation/probes

IPCA example

- Sigafoos, Woodyatt, Keen, Tait, Tucker, Rogerts-Pennell (2000). Identifying potential communicative acts in children with developmental and physical disabilities. *Communication Disorders Quarterly 21,* 77-86

- Please describe how the individual….
  - Greets you/others
  - Responds to their own name

- Answers are entered into a grid

	Greeting	tired	

Communication Matrix

- Rowland, C., & Fried-Oken, M. (2010). Communication matrix: A clinical and research assessment tool targeting children with severe communication disorders. *Journal of Pediatric Rehabilitation Medicine: An Interdisciplinary Approach, 3*, 319-329.
- Online parent assessment!

Observations?

Direct assessments/probes

Observations

Interviews
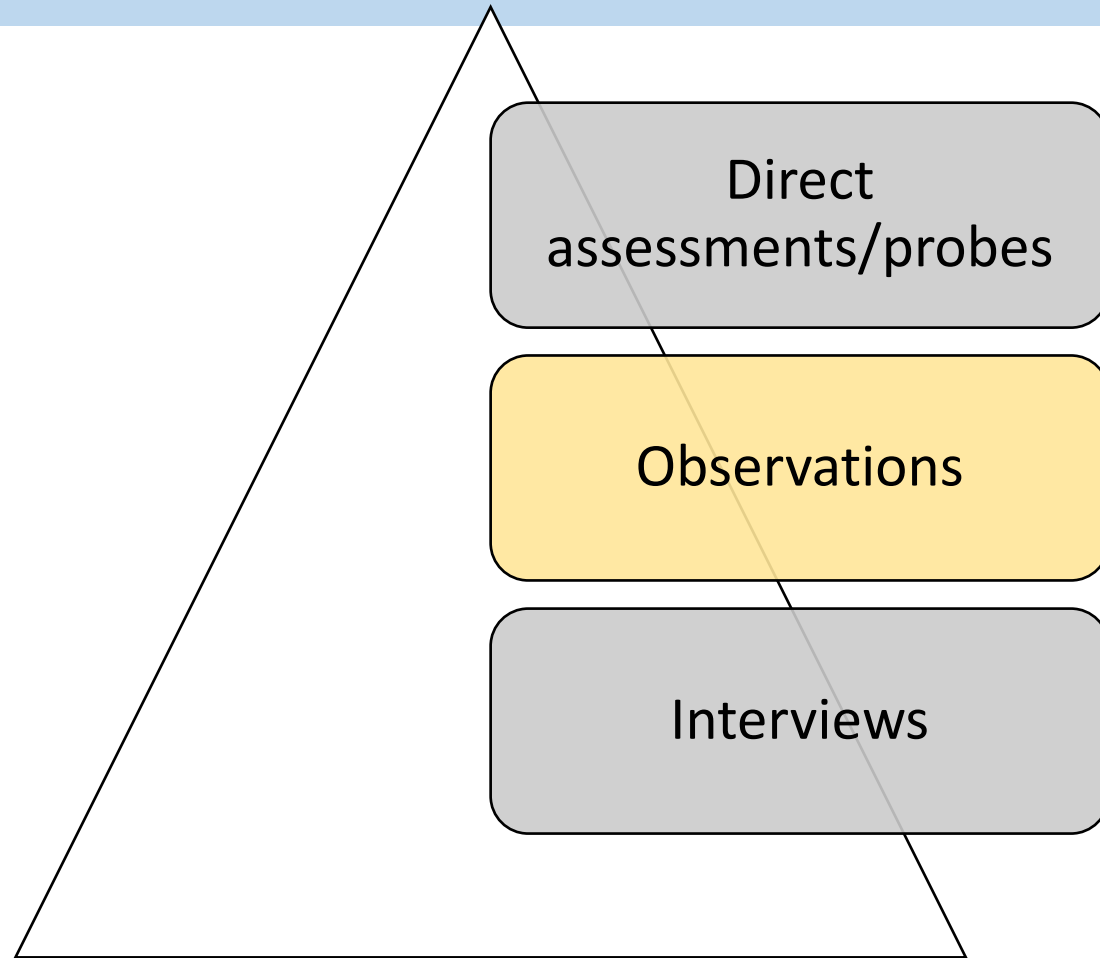
Communication Sampling

- Why collect a communication sample?
- Protocols like CSBS, ESCS, CCS designed to provide opportunities
  - Behavior regulation
  - Joint attention
  - Social interaction (CSBS)
  - Response to Question

Forms and Functions of Early Communication

- Communication acts can be described in terms of their forms and functions

- Forms are *how* the individual communicates with gestures, vocalizations, signs, symbols and words.
  - Referred to as potentially communicative behaviors (PCBs) in the CCS.

- Intentional communication acts also have functions

- Functions refer to *why* the individual is communicating

COMMUNICATIONS
COMPLEXITY
SCALE

The Scripted
Play Protocol

Create an opportunity for communication!

- This is probably the most important slide in the PowerPoint!

- We want children to initiate requests and comments

- Ways to create opportunities
  - Take turns with materials then *wait*
  - After playing with toys that work, provide a broken toy (seemingly by mistake) then *wait*
  - Comment about the materials, e.g., torn book, then *wait*
  - Only provide some of the materials, e.g., magnatiles, then *wait*
  - Slip in an unusual object, or discretely start a remote control toy, and *wait*

Natural Play Style

Waiting Time

- Giving the child plenty of time to make a request or comment on the situation.
  - Examiner waits at least 5 and up to 10 seconds after providing one of the scripted opportunities before re-presenting the activity again or moving on.
  - Examiner remains natural during waiting time
    - E.g., smile and look interested but patient

Identifying a Communication Act
or- *what* are we waiting for??

- What type of behaviors are we looking for?

- In order for a behavior to be considered an intentional communicative act, the answer to all three of the following questions must be yes.

  1. Was the act a gesture, vocalization, verbalization, triadic eye gaze, sign, or speech or speech generated from an SGD?
  2. Was the act directed toward the examiner? (Direction to the examiner may be indicated through a gesture or look toward the adult.)
  3. Did the act serve a communicative function, such as regulating the adult's behavior, attracting the examiner's attention to the child, or directing the examiner's attention to an object or event?

- Participants don't always respond to opportunities with an intentional communication act….we'll get to that!

Sincerity

Opportunities for Repair

- Giving the participant an opportunity to repeat their request or comment following a communication breakdown
  - Examiner waits 5-10 seconds after saying "what?"to see if participant will repair the communication breakdown before moving on to a new task.
  - Examiner counts to 10 in their head to make sure they have waited long enough

Example of play task in scripted assessment (setting up an opportunity for joint attention)

Your turn

- How could you create a sampling activity for:
  - Joint attention (commenting about an unusual event) by a 6 year old with emergent language
  - Protesting by a 12 year old (think ethically ☺)

Example of natural play routine that might be observed for CCS scoring

Scoring

- Highest communication for scripted interaction
- Interval coding for unscripted interactions

CCS Scores

Number	Definition	Communication level
0	No response	
1	Alerting - a change in behavior, or stops doing a behavior	Preintentional
2	Single orientation only -- on an object, event or person; can be communicated through vision, body orientation, or other means.	Preintentional
3	Single orientation only + 1 other PCB (potentially communicative behavior)	Preintentional
4	Single orientation only + more than 1 PCB	Preintentional
5	Dual orientation - shift in focus between a person and an object, between a person and an event using vision, body orientation, etc. (without PCB)	Preintentional
6	Triadic orientation (e.g. eye gaze or touch from object to person and back)	Intentional Non-Symbolic
7	Dual orientation + 1 PCB (e.g., dual focus + gesture)	Intentional Non-Symbolic
8	Dual orientation + 2 or more PCB (e.g., dual focus + gesture + vocalization, switch closure)	Intentional Non-Symbolic
9	Triadic orientation + 1 PCB (e.g. triadic + vocalization)	Intentional Non-Symbolic
10	Triadic orientation plus more than 1 PCB (e.g. triadic plus vocalization and differential switch closure)	Intentional Non-Symbolic
11	One-word verbalization, sign or AAC symbol selection	Intentional Symbolic
12	Multi-word verbalization, sign or AAC symbol selection	Intentional Symbolic

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Modifications to Communication Sampling

- For learners with sensory challenges
    - Imitating the learners motor acts
    - Using toys that vibrate to establish turns
    - Using vestibular activities like bouncing on a trampoline

Other areas to assess

- Comprehension
- Vocalizations

How to measure comprehension?

- Olivia Boorom research project lists:

- Direct test items

Test Item	Original test	Format	Skill Category
Turns head to locate source of sound	PLS5 #5	Observation	Auditory Responsiveness
Actively searches for a person who is talking	PLS5 #6	Observation	Auditory Responsiveness
Interrupts activity when you call his/her name	PLS5 #10, Mullen #10	Direct	Auditory Responsiveness
Understands simple verbal routines with gestures - examiner extends arms and says "up?"	Mullen #8	Direct	Understands simple input?
Understands familiar words without gestures	Mullen #9	Direct	Understands simple input
Understands inhibitory words	Mullen #11	Direct	Understands simple input
Respond to simple familiar input such as "bye bye" or "clap" without gestures?	Mullen #12 CALC #1	Direct/Parent Demonstration	Understands simple input
Understands gestures and simple commands	Mullen #13	Direct	Understands simple input
Understands simple commands without gestures	Mullen #15	Direct	Understands simple input
Looks toward objects caregiver points to and labels	CALC #2	Direct/Parent Demonstration	Joint attention
Looks toward objects caregiver looks at and labels	CALC #3	Direct/Parent Demonstration	Joint attention
Identifies objects	Mullen #14, PLS #20	Direct	Early vocabulary
Identifies body parts on self or others	PLS #20	Direct	Early vocabulary
Identifies body parts on a picture	Mullen #18	Direct	Early vocabulary
Identifies pictures of common objects	Mullen #21, PLS #21	Direct	Early vocabulary
Responds to simple questions	Mullen #16 #19	Direct	Early vocabulary
Understands simple actions in pictures	PLS #24	Direct	Early vocabulary
Understands simple actions out of context	CALC #4	Direct/Parent Demonstration	Early vocabulary

Parent report

Test Item	Original test	Format	Skill Category
Turns head to locate source of sound	PLS5 #5	Parent report	Auditory responsiveness
Turns in response to caregiver's voice	VABS3 #1	Parent report	Auditory responsiveness
Actively searches for person who is talking	PLS5 #6	Parent report	Auditory responsiveness
Child responds when you call his/her name	CSBSQ #29, VABS3 #3	Parent report	Auditory responsiveness
Does your child understand what you want when you extend your hands and say, "Come with me"	PLS5 #14	Parent report	Understands simple input
Does your child understand a specific word or phrase (other than no) for family members, pets, objects, or social routines	PLS5 #16	Parent report	Understands simple input
Does your child understand or react to the word "no" or "stop"?	VABS3 #7	Parent report	Understands simple input
Does your child understand the meaning of "yes"?	VABS3 #9	Parent report	Understands simple input
Does your child respond to simple familiar input such as "bye bye" or "clap" without gestures?	CSBS CQ #31	Parent report	Understands simple input
Does your child respond to simple commands with gestures, such as "give it to me" with hand out?	CSBS CQ #30, PLS5 #18	Parent report	Understands simple input
Does your child follow instructions requiring only one action, like "sit down" or "come here" without gestures?	VABS3 #10	Parent report	Understands simple input
Does your child look at objects/people that you call attention to with words and pointing?	VABS3 #4, PLS5 #13	Parent report	Joint attention
Does your child identify objects when asked by pointing to them or grabbing them?	VABS3 #11	Parent report	Early vocabulary
Does your child identify body parts on themselves or others?	VABS3 #14	Parent report	Early vocabulary
Does your child identify pictures in a book when asked?	VABS3 #17	Parent report	Early vocabulary
Does your child respond to simple questions like "where's daddy?"	VABS3 #22	Parent report	Early vocabulary
Does your child identify simple actions in pictures?	VABS3 #21	Parent report	Early vocabulary

Vocal development

- Why measure vocal development?
- How to measure vocal development?
- Phonemic scoring
- Diversity of key consonants used in communication acts
- Proportion of vocalizations that are communicative

Diversity of Key Consonants Used in Communication Acts (DKCC)

- Earn one point each for use of 10 consonants within a communication act
  - Consonants: (/m/, /n/, /b/ or /p/, /d/ or /t/, /g/ or /k/, /w/, /l/, "j," /s/, and "sh"
  - Communication acts include words, nonword vocalizations with evidence of coordinated attention and gestures

What is an ecological inventory?

Ecological approach to identifying treatment targets

Discrepancy analysis

Partial participation

Student: Molly, age 4 years, 8 months (is active, enjoys books, likes to laugh, has autism)

Activity: Show and Tell (10 minutes)

Level: Preschool

Steps in activity (peers without disabilities)	Natural cues	Communication skills needed	Student perfor-mance	Discrepancy analysis	Intervention plan (skills to teach and supports to aid learning)
Students go to carpet area and sit on rug	Teacher direction; see carpet area; want to share	Receptive: understand teacher directions	0	Not attending when teacher gave direction	*Teach:* "reading" pictures for information (receptive); performing actions depicted in picture (expressive)
					Supports: teacher stands next to Molly when giving direction; shows picture of Molly sitting on the rug
Students listen to teacher directions	Teacher in front of room; teacher talking; want to know the rules	Receptive: understand teacher directions	0	Has difficulty understanding large amounts of oral input because of less developed vocabulary; does not have item to share	*Teach:* "reading" pictures (receptive); identifying correct picture from field of three (expressive)
					Supports: appropriate pictures; request family arrange for Molly to have item to share once a week
Students raise hands; share by describing item and answering peers' questions	Teacher directions; have something to share	Expressive: raise hand; share/explain item; answer questions	0	Speaks in one-word sentences (e.g., *mine*)	*Teach:* teach Molly to use augmentative and alternative communication to "share" (expressive)
					Supports: prerecorded description of item by sister; pair with peer who answers questions
Students listen to others sharing; ask questions about item	Peer in front of room talking; want to see item	Receptive: understand peer's comments	0	One-word speech; difficulty understanding peers because they talk softly; does not understand enough to know what to ask	*Teach:* vocabulary associated with item (e.g., what item is, color, size) (receptive); make comment using cards (expressive)
					Supports: small laptop or tablet; adult pulls up images of item being shared when possible; cards that say "that's fun" or "I like that" so comments can be made
Students get up from carpet and line up by door for recess	Teacher directions; peers getting up/lining up; want to go outside	Receptive: understand teacher direction; understand natural cues	0	Not attending; does not currently attend to or understand natural cues of other students getting up	*Teach:* "reading" pictures (receptive) and performing action (expressive)
					Supports: teacher stands next to Molly; provide pictorial support

Figure 3.5. Ecological inventory of communication skills for Molly, a 4-year, 8-month-old preschooler with autism. (*Key:* +: Student is able to independently complete all parts of step; 0: Student needs assistance with some or all parts of step.)

IEP development guide

- Compare these goals:
- Student will show expressive and receptive use of speech-generating device
- Student will look at communication partner and tap arm to gain attention when partner sits close by, but withholds attention in classroom activities and in cafeteria
- Can you picture what will happen and how you will measure progress?

Measurement

- "Often the most important aspect of the targeted behavior is not accuracy, but independence, duration, frequency, latency, and so on."
- Thinks of alternatives to 80% correct in 4/5 trials

Functionality

- Communication purposes from Light: (a) communication of needs and wants, (b) information transfer, (c) social closeness, and (d) social etiquette.

- Compare these two:
  - Will use speech-generating device to choose books and to direct peers to turn book pages
  - Will repeat names of five body parts

- Does the goal reference the educational curriculum?

From Rowland & Quinn (2015)

- A. Are the goals focused as precise?

- Not- "Student will show expressive and receptive use of speech-generating device"

- Better- "*Student will look at communication partner and tap arm to gain attention when partner sits close by, but withholds attention in classroom activities and in cafeteria*"

- B. Will the goals be measured appropriately?
  - Rather than percent correct, think of independence, duration, frequency, latency and so on
  - Think of a better measurement unit for this goal: student will select the correct symbol on their array to request an item 50% of the time

- C. Do the goals target active participation?
- Not- Will follow a one-step command when presented by the teacher
- Instead- During science class, when the teacher instructs student to go to join their group before starting an experiment, the student will independently respond to the teacher's verbal direction accompanied by a gesture during 4/5 class sessions
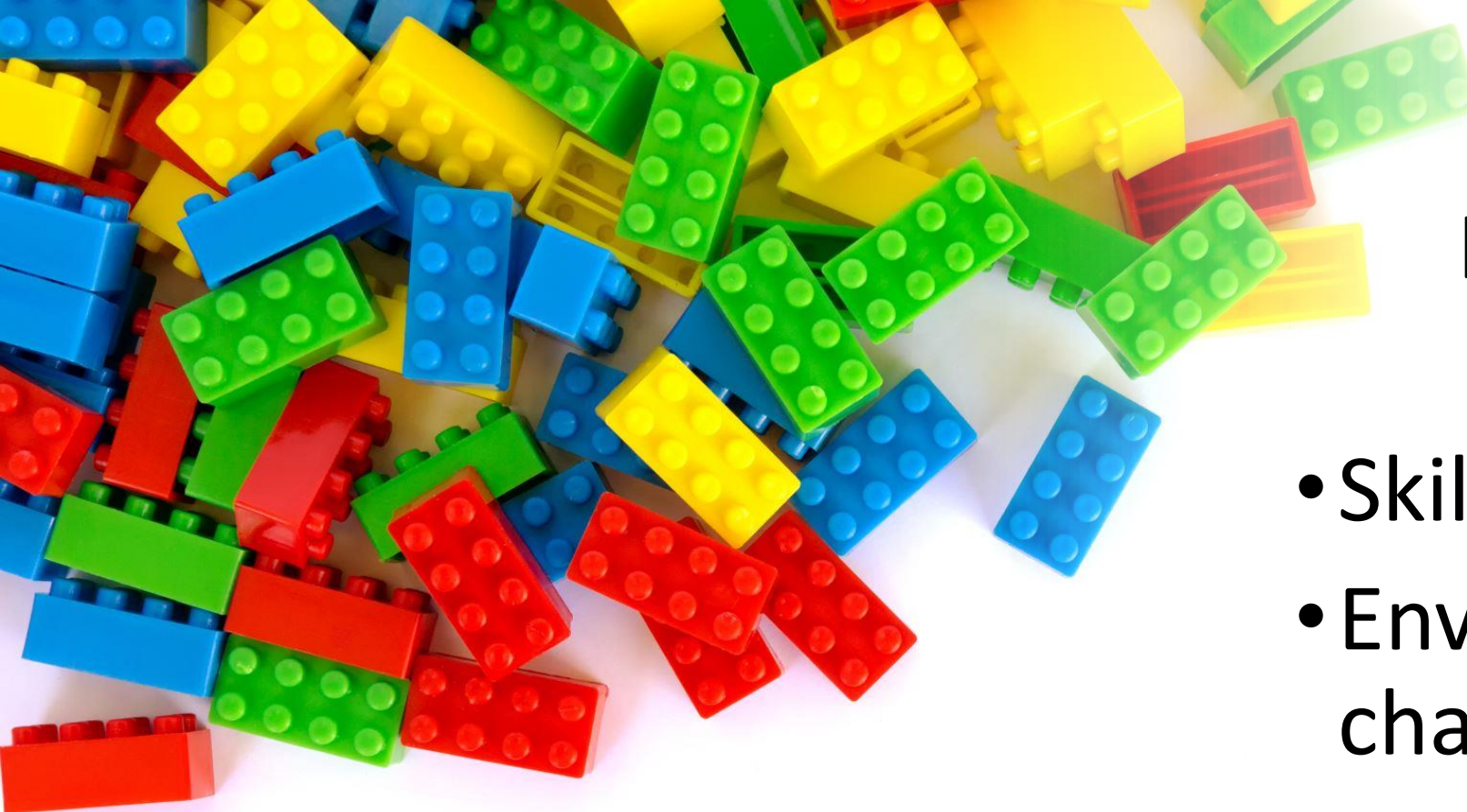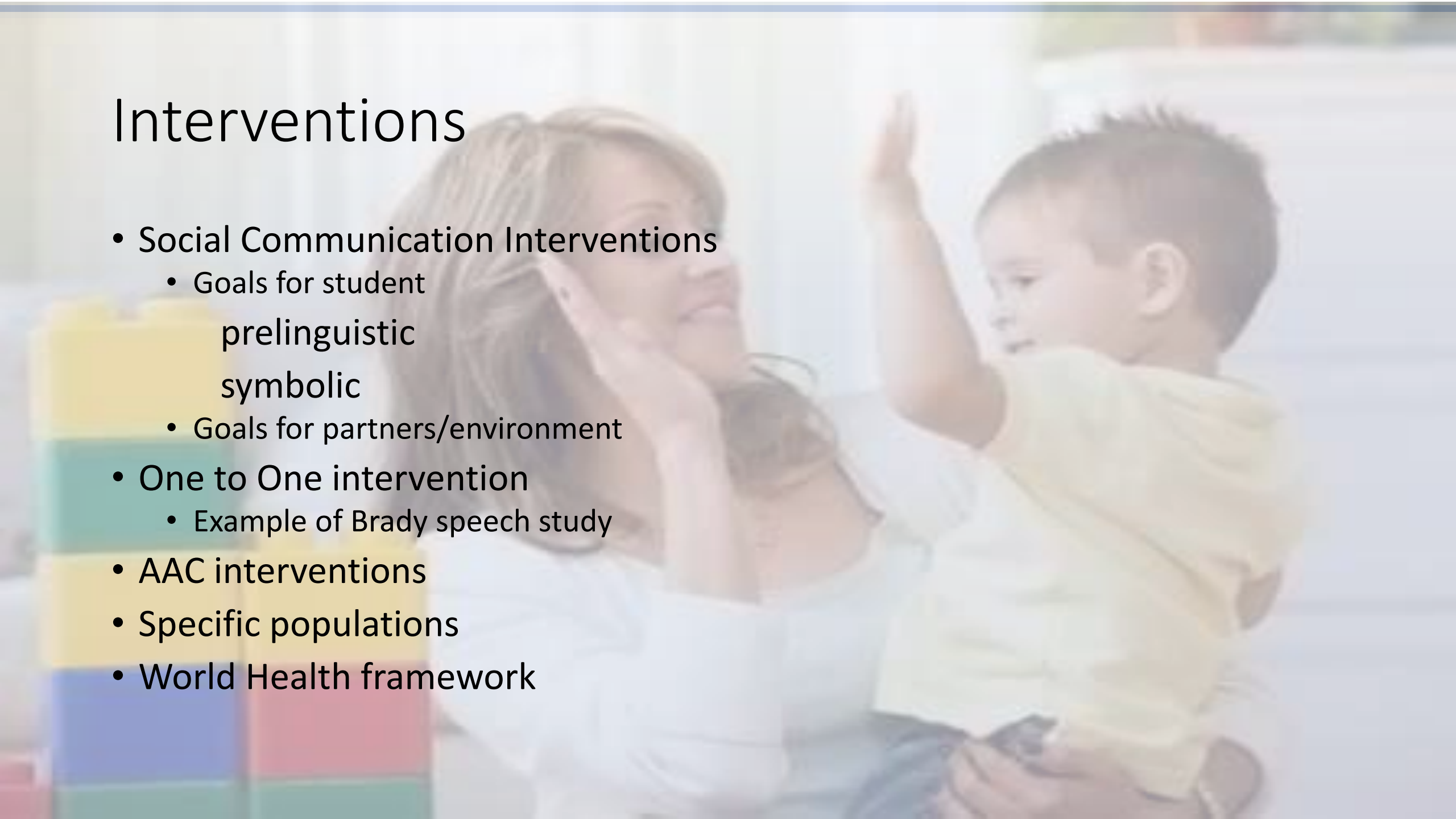
Interventions

- Skill building
- Environment changing

Interventions for complex communication needs- gestures, AAC and spoken communication

Interventions

- Social Communication Interventions
  - Goals for student

    prelinguistic

    symbolic
  - Goals for partners/environment
- One to One intervention
  - Example of Brady speech study
- AAC interventions
- Specific populations
- World Health framework

Social Communication Interventions

- Different names, same principles
  - Prelinguistic milieu interventions
  - JASPER
  - Early Start Denver model
  - Hanen More then Words
  - Reciprocal Interaction Training
  - Pivotal Response Teaching

Operational Principles

- Create contexts where children communicate naturally

- Follow the child's lead but address specific communicative targets

- Embed opportunities to communicate

- Use the least intrusive prompts necessary to promote communication targets

Teaching natural gestures

- What are natural gestures?

- Why teach natural gestures?

- How do we teach natural gestures?

- What is the evidence-base for teaching natural gestures?

- What are next steps in gesture-teaching research?

What are Natural Gestures?

- Gestures that are part of a culture's nonverbal communication system
- Examples: pointing, showing, giving, shrugging, open palm request….
- They are nonsymbolic
  - Not part of a sign language system
- Learned through everyday interactions with caregivers
- Remain in communication system even after we learn to communicate primarily with symbolic means

Why teach natural gestures?

- **Theoretical reasons**
  - Occur developmentally before symbolic communication
  - Thought to pave the way for symbolic communication
  - Provide opportunities for linguistic input

Why teach natural gestures?

- Practical reasons
  - May be easier to teach than some forms of symbolic communication
  - No extra equipment needed
  - Gestures are readily understood by members of community
  - Can be used across many different contexts

When to teach gestures?

- Gestures as one part of communication intervention
  - Early phase of expressive communication
  - As augmentative forms when other forms of communication are not available or are not working
    - e.g., SGD not available
    - e.g., communication partner doesn't know sign

How to Teach Natural Gestures

- Principles described in Prelinguistic Milieu Teaching (PMT), see Warren et al., (2006)
  - Warren, S., Bredin-Oja, S., Fairchild Escalante, M., Finestack, L., Fey, M., & Brady, N. (2006). Responsivity education/ Prelinguistic milieu teaching. In R. McCauley & M. Fey (Eds.), *Treatment of language disorders in children* (pp. 47-77). Baltimore, MD: Brookes Publishing Co.

- Step 1: Find objects/activities/people that participant will be motivated to communicate about
  - Different for every individual
  - Preference assessments or questionnaires
  - Examples of activities: toy box, snack activities, motor activities like swinging,
  - Range to match development and interests

How to Teach Natural Gestures

- Step 2. Develop turn taking routine(s) involving activities identified in step 1
  - Examples:
    - Rolling a ball
    - Putting colored discs on a light box
    - Pretend cutting food
    - Turning on and playing with any battery operated toy
  - More elaborate routines can be used with children who have advanced play skills

Other types of routines

- Meal times
- Getting ready to go outside
- Play with a certain toy or object
- Songs with repetitive lines and actions
- The type of routines will vary with the child's play skills

Song routines

Joint attention routines

How to Teach Natural Gestures

- Step 3 (for teaching requests)
  - Interrupt the routine in order to provide an opportunity for the child to request
  - For example: hold on to the ball, or pause the swing, or turn off the battery operated toy….
  - May add an expectant look

How to Teach Natural Gestures

- Step 4 : wait

- Step 5: if necessary prompt the targeted response
  - Physical, hand over hand prompts
  - Model prompts
  - Verbal prompts
  - Fade prompts as quickly as possible

How to Teach Natural Gestures

- Step 6: continue the routine/activity. This reinforces the child's behavior.

- General pointers
  - Shorter routines provide more opportunities for communication
  - Change activities when child just begins to lose interest

Protests

- Considerations for vocalizations?
- Considerations for AAC?
- Teaching eye gaze shifts- triadic eye gaze curriculum

Specific strategies to increase vocal production

- Vocal play
- Imitation

Specific strategies to increase vocal production, continued

- use sounds within child's repertoire

Specific strategies to increase vocal production, continued

- Verbally prompt for vocalizations
- Specifically acknowledge vocalizations

Specific strategies to increase vocal production

- Vocal play
- Imitation

Specific strategies to increase vocal production, continued

- use sounds within child's repertoire

Specific strategies to increase vocal production, continued

- Verbally prompt for vocalizations
- Specifically acknowledge vocalizations

Teaching triadic eye gaze

- Protocols designed for different ages and populations

Strategies for increasing eye gaze

- Within routine, child is looking at object, then, intersect gaze

Increasing eye gaze continued

- Verbally prompt for eye gaze

- Specifically acknowledge the eye gaze

- Provide the desired object contingent on the eye gaze

Action Plan

- Identify a child for whom increasing vocalizations would be an appropriate goal.
  - How would you teach increased vocalizations for this child?
- Identify a child for whom teaching eye gaze would be appropriate.
  - How would you teach increased eye gaze to this child? (be specific)

Combining components

- Vocalization + eye gaze + gesture = a clear, recognizable communication act!

Strategies for combining gesture, eye gaze and vocalizations

- Time Delay
  - If the child produces one or two components of a communication act, wait expectantly (i.e., use time delay) to prompt the second (or third) component.
- Ask, "what do you want?" or another general prompt and wait again

Strategies for combining gesture, eye gaze and vocalizations, continued

- Immediately after the child produces the targeted component (eye gaze, vocalization or gesture), provide the appropriate consequence and verbal feedback

What is she waiting for?

Is this just for little ones?

- No!
- See Ogletree, Price & Campbell (2020)

Some other examples....

Romano & Windsor (2020). Increasing deictic gesture use

- What are deictic gestures?
- How did they teach them?
- Modeling
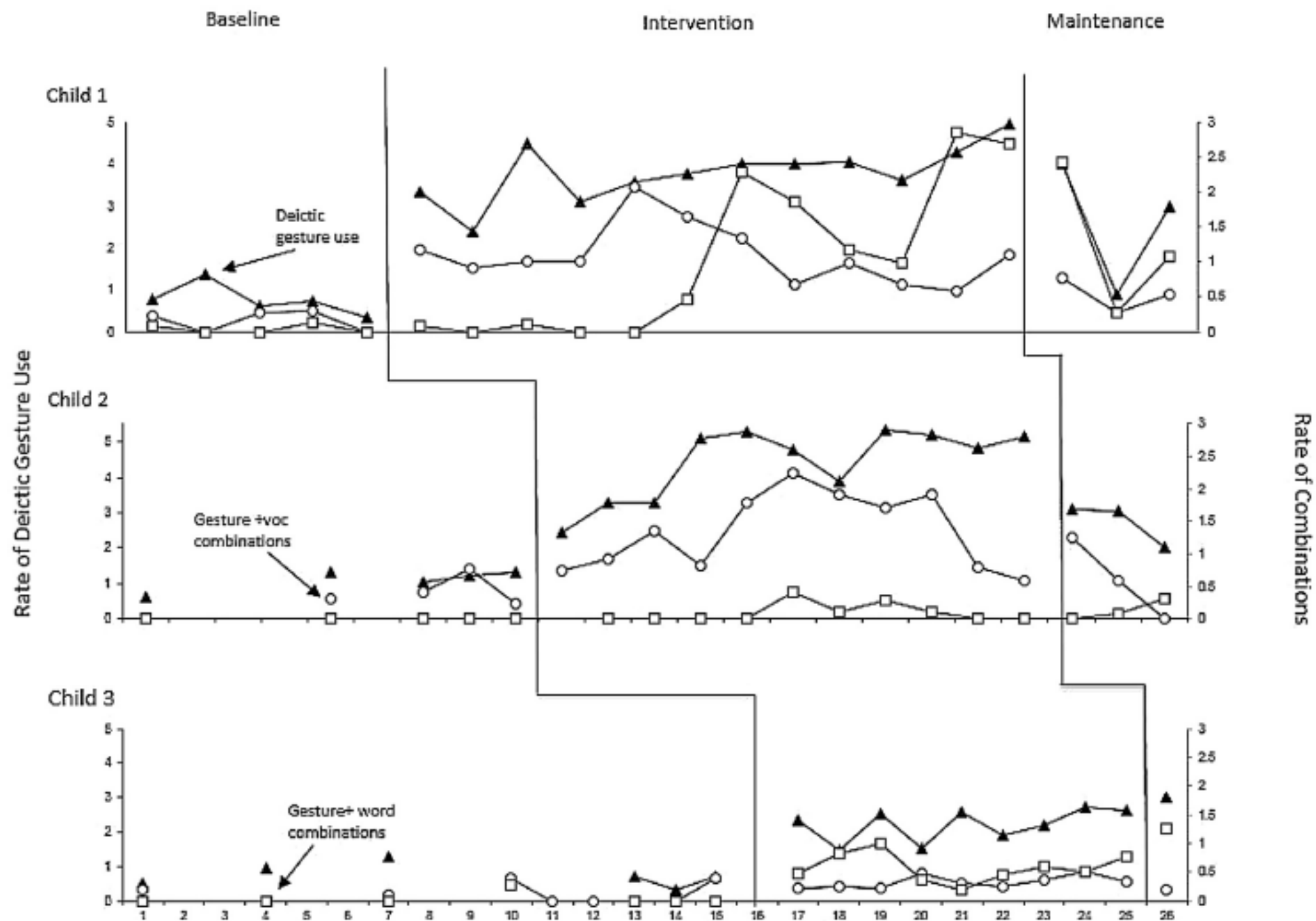- Opportunities via choices plus wait time
- Respond/expand

Fig. 1. Rates of child deictic gesture use and gesture combinations across participant.

- Interventions to increase social gaze: Holyfield (2019). Preliminary investigation of the effects of a prelinguistic AAC intervention on social gaze behaviors from school-age children with multiple disabilities

- Triadic eye gaze: Olswang, Feuerstein & Pinder (2022)

- Increasing vocalizations: Gazdag & Warren (2000); McDaniel (2024)

Adding AAC into the intervention

- **The ImPAACT Program:** Developed by SLPs Cathy Binger and Jennifer Kent-Walsh, this research-supported approach provides the foundation for several training programs. The eight-step program focuses on **teaching SLPs to work with students and their communication partners**.

- **Power:AAC Modules:** SLP Gail Van Tatenhove created a **set of learning modules on AAC implementation** for PaTTAn. Each module includes a video, handouts, pre- and post-tests, and other resources.

- **Model as a MASTER PAL Series:** This 11-part series covers **basic intervention strategies and practices for communication partners of early AAC learners**. SLPs can work through the materials on their own or use them to present a sequence of trainings to teachers, paraeducators and families. Created by SLP Tabi Jones-Wohleber, this series is free and includes slides, speaker notes, handouts, video suggestions and activity ideas.

Tips from Carol Zangari, https://leader.pubs.asha.org/doi/full/10.1044/leader.SCM.24042019.36

- Communication partners need easy access to AAC
- May need training on specific technologies
- Use data to reinforce and guide continued use.
- https://www.youtube.com/watch?v=lSN318WaJzA

Promoting generalization

- Ask stakeholders to nominate routines
  - Parents
  - Teachers
- Kashinath Woods & Goldstein (2006). Recorded parents use of teaching strategies
  - Arranging the environment
  - Using natural reinforcement
  - Using time delay
  - Imitating contingently
  - Modeling
  - Gestural/visual cuing
- Parents asked to describe strategies and where the strategy could be embedded in their own routines

Remember

- Our goal is to embed these interventions in inclusive settings
- An iterative process of identifying communication needs, skill building, environmental interventions (e.g., waiting for a response; providing access...), and assessing consumer satisfaction

References

- Available upon request