Role of the SLP in the ABA Classroom: Practical Application in Intervention

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Courtney Devlin, MS, CCC-SLP/L
Liz Willis, MS, CCC-SLP/L, BCBA

with assistance from PaTTAN Autism Initiative consultants

Pennsylvania Training and Technical Assistance Network

PaTTAN's Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.

PDE's Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.

Agenda

- Overview of ABA and verbal behavior
- Selecting form of communication
- Vocal training
- "Speech Group"

Who are you?

WHAT ARE ABA AND VERBAL BEHAVIOR?

What is ABA?

Applied Behavior Analysis (ABA) is a science and a discipline devoted to understanding and improving human behavior.

Purpose: to improve *socially-significant behavior*

language, academic skills, social skills, daily living, self care, recreation and leisure skills, etc.

ABCs of ABA

- A=**antecedent:** What happens before behavior
- B=**behavior:** What the individual does
- C=**consequence:** What happens after behavior
  - Reinforcement: increases behavior
  - Punishment: decreases behavior

When analyzing teaching interactions in an ABA classroom, consider the antecedents, behavior, and consequences

ABCs: examples

Antecedent	Behavior	Consequence
Something interesting happens	Look in that direction	See the Event
Need to go out and seeing a door knob	Turning the knob	Door opens
Driving and the traffic light turns red	Depress brake pedal	Car stops

Language as Behavior

- Behavior is *anything* a person does that is:
  - Observable (can sense it)
  - Measurable (can count or time it)
- Communication is observable and measurable
- ABCs of ABA can be applied to communication

Verbal Behavior

Verbal behavior is the analysis of language according to ABCs. Premise:

- Language is controlled by antecedents and consequences
- Consequences are delivered by/through other people (social!)

Verbal Behavior: Example

Antecedent	Verbal Behavior	Consequence
Want water →	Say "water" Sign "water" Write "water" → Point to water Exchange a picture	Person delivers water

Functions of Communication

ABCs of language tell us *why we say what we say*

- To ask for what we want
- To label things
- To answer questions
- To repeat things we hear

Verbal Behaviors

Function	Antecedent	Verbal Behavior	Consequence
Mand (asking)	Motivation (wants cookie)	Verbal behavior (says "cookie")	Direct reinforcement (listener gives cookie)
Tact (labeling)	Sensory Stimulus (sees or smells cookie)	Verbal behavior (says "cookie")	Non-specific reinforcement ("It IS a cookie")
Intraverbal (answering)	Verbal Stimulus (someone says "What can you eat?")	Verbal behavior (says "cookie")	Non-specific reinforcement ("Yes! You CAN eat a cookie")
Echoic (repeating)	Verbal Stimulus (someone says "cookie)	Vocal-verbal behavior: repeats all or parts of the antecedent (says "cookie")	Non-specific reinforcement ("Cookie! You said cookie!")

Other Relevant Behaviors

Function	Antecedent	Behavior	Consequence
Listener Response* (following directions)	Verbal Stimulus (someone says: "Touch the cookie.")	Non-verbal behavior (touches cookie)	Non-specific reinforcement ("Great job touching the cookie.")
Motor Imitation (imitating)	Non-Verbal Behavior (someone claps)	Non-verbal behavior: imitates all or part of the antecedent (imitates clapping)	Non-specific reinforcement (attention for imitating)
Match to Sample (matching)	Non-Verbal Stimulus (picture of a cookie)	Non-verbal behavior: selects a second stimulus with shared properties (picks up a similar picture of a cookie)	Non-specific reinforcement ("Nice matching.")

What do our ABA-based classrooms look like?

- Instruction directly guided by assessment*
- Interprofessional collaboration*
- Common goals among team members*
  mutual focus on speech and language (verbal behavior)

*See morning presentation

What do our ABA-based classrooms look like?

- Input from team members based on their respective strengths.
- Empirically-validated programs and teaching procedures derived from the principles of ABA

SLP in ABA Classroom:

SELECTING FORM OF COMMUNICATION

Selecting Form of Communication

- Challenges?

Where to start?

What assessments to use?

Collaboration with team?

Disagreements amongst team members?

Form vs. Function

- **Response form** is the general shape and physical characteristics of a behavior.
- **Response function** is the reason for the behavior (type of reinforcement).

Form vs. Function

Form		Function: Verbal (communication!)	Function: Non-Verbal
	Vocal	speech	non-social vocal noises ex: coughing
	Non-Vocal	sign language/ gestures; writing; typing; selecting pictures	non-social body movements ex: crossing legs

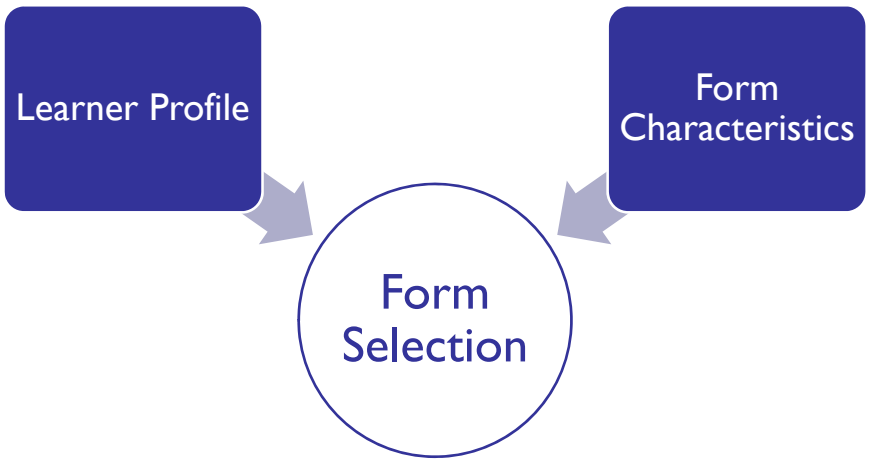
Selecting Form of Communication

Analyze and integrate two variables:

1. Learner profile

2. Characteristics of each form based on analysis and best available research

Selecting Form of Communication



Learner Profile

What are the student's baseline skills? *Team* (teacher, SLP, OT, PT, etc.) assesses:

- Mand, tact, intraverbal, listener skills*
- Spontaneous vocalizations*
- Imitation skills*
- Match-to-sample skills*
- **Echoic skills***
- History of Communication Skills
- Family/Team Member Input

*found in VB-MAPP and similar assessments

Data Needed:	Types of Assessment (circle if relevant):	Date:	Staff:
Identifying Reinforcers	• Pairing Data • Preference Assessments • Reinforcer Assessments		
Vocal Skills	• Vocalization Baseline • EESA • Phonemic Inventory • Language Sample		
Motor Imitation	• Initial Eval/IEP data • Initial VB-MAPP Assessment • IT Program Data • OT/PT data collection		
Visual Perceptual/ MTS Skills	• Initial Eval/IEP data • Initial VB-MAPP Assessment • IT Program Data • OT data collection		
Response Effort	• Response Fluency for vocal, MI, MTS skills • OT/PT Input on physical skills/mobility • OT input on fine motor skills		
History of Communication Skills	• Initial Eval/IEP data • Initial VB-MAPP data		
Family Input	• Notes from parent consults/ meetings • Additional input to be added during IEP meeting		

*Modified from Devlin, Doran, Russ, Silveri-Hiller, &Willis, 2016

Selecting Form of Communication

- Consider *vocal* first!
- Why?
  - humans are evolved to speak
  - our vocal apparatus is always with us (portability)
  - largest community of speakers and listeners

Selecting Form of Communication

Vocal Programming	AAC + Vocal programming
• Readily attempts to echo instructor when asked AND • Speech generally intelligible to listeners Level 2 echoics on VB-MAPP	• Does not attempt to echo instructor when asked OR • Speech largely unintelligible to listeners Level 1 echoics on VB-MAPP

Form Characteristics

Jack Michael (1985) was the first person to make a clear distinction between two "categories" of verbal behavior.

- Topography-based
- Selection-based

Topography vs. Selection-Based

	Definition	Some Types	Example
Topography-Based Responding	Motor movements for each meaningful unit look and/or feel different	• **Speech** • Sign language • Writing	Saying "cat" vs. Saying "dog"
Selection-Based Responding	Motor movements for each meaningful unit look and/or feel essentially the same	Picture/symbol-based systems • PECS • Core boards • Picture-based SGDs	Pointing to  vs. Pointing to 

Videos: Topography vs. Selection-Based

Topography vs. Selection-Based

Communication Modality	Communication Function			
	Mand (Requesting)	Tact (Labeling)	Intraverbal (Answering questions)	Echoic (Vocally Imitating)
Speech	X	X	X	X
Sign Language	X	X	X	
Writing	X	X	X	
PECS	X			
Core Board	X			
Picture-based Voice Output	X			

*Forbes, 2014

Form Characteristics

"The Big 5"*

- Fast: response efficiency
- Easy
  - Simple discrimination vs. complex discrimination
  - Ease of motor movement
- Cheap
- Effective
  - Listener community
  - Communicate across verbal functions
- Always accessible: across *all* environments

Other Considerations**

- Facilitation of speech
- System maintenance

*Esch, 2010 as cited in Carbone, 2016
**Carbone, 2016

Selecting Form of Communication

- Consider **vocal** (speech) first!
- If AAC is needed (weak echoic skills, unintelligible speech), consider:
  - Learner profile
  - Form characteristics
    - Topography vs. Selection-Based
    - Big 5: Fast, Easy, Cheap, Effective, Accessible
    - Facilitation of Speech
    - System Maintenance

Changing or Adding Modality

- Learner profile always changing
  - Constantly assessing modality
  - Data based decision making
- Multimodal communication (video)

DO NOT GIVE UP ON SPEECH!

- AAC should almost always be viewed as a temporary "fix" for a vocal communication deficit.
- If a learner has few spontaneous vocalizations, does not attempt to echo on request, and/or has poor speech intelligibility, the learner requires a **vocal training program**.

SLP in ABA Classroom:

VOCAL TRAINING

Vocal Training

- Challenges?

Where to start?

What assessments to use?

How to determine an appropriate program?

How to select targets?

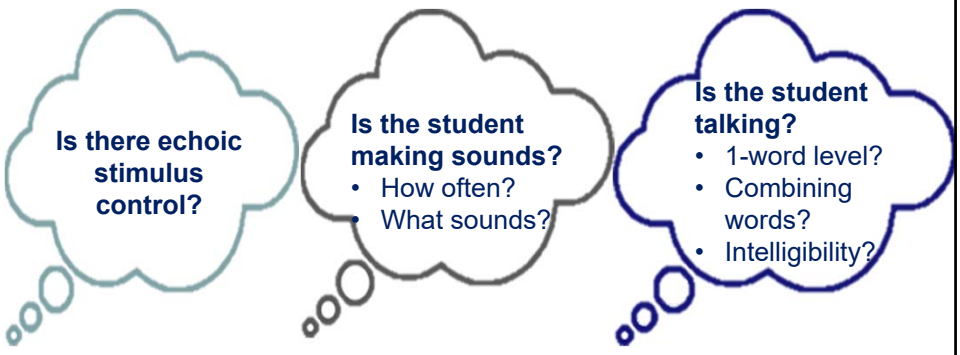
Steps in Vocal Training

1. Assess
2. Analyze
3. Select Treatment

Assessment

1. Assess

Assessment should answer the following questions:



Kinds of Speech Assessments

★ Vocalization baseline (Esch, 2014)

★ Early Echoic Skills Assessment (Esch, 2008)

★ Intelligibility assessment of tact and mands

- Speech sample and/or phonemic inventory
- Standardized articulation assessments, such as:
  - Goldman-Fristoe Test of Articulation 3 (Goldman & Fristoe, 2015)
  - Arizona-4 Articulation Proficiency Scale (Fudalla & Stengall, 2017)

Vocalization Baseline

30 min free operant vocal play interval recording for _____ (name)

- Record speech vocalizations that occur during each 30-sec cell
- Mark + for each separate speech vocalization OR transcribe each phonetically

30s	1m	30s	2m	30s	3m	30s	4m	30s	5m
30s	6m	30s	7m	30s	8m	30s	9m	30s	10m
30s	11m	30s	12m	30s	13m	30s	14m	30s	15m
30s	16m	30s	17m	30s	18m	30s	19m	30s	20m
30s	21m	30s	22m	30s	23m	30s	24m	30s	25m
30s	26m	30s	27m	30s	28m	30s	29m	30s	30m

Vowels	Frequency

Consonants	Frequency

Vocalizations occurred in _____/60 intervals

Vocalization Baseline = _____%

Barbara E. Esch, Ph.D.
Esch Behavior Consultants, LLC

Vocalization Baseline

- Record all vocalizations in one or more 30-minute "free operant" (play) settings.
- Take a vocalization baseline when learners:

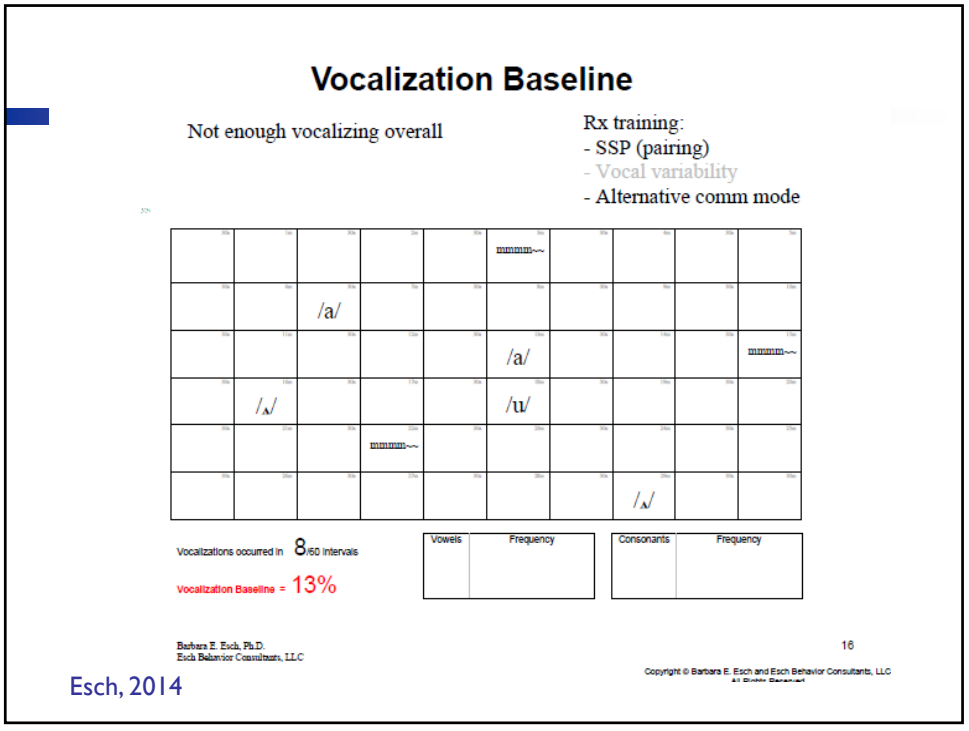
  …vocalize/babble infrequently

  and/or

  …have limited sounds in their repertoire

  and/or

  …do not yet have vocal-verbal behavior (speech) and instructor has poor echoic stimulus control



Esch, 2014

Vocalization Baseline

What can vocalization baseline tell you?

- Are vocalizations automatically reinforcing?
  - Does the student spontaneously vocalize?
- Is the student getting a lot of practice through natural contingencies?
  - How often does the student spontaneously vocalize?
- What "raw materials" do we have to work with?
  - Is the student vocalizing a variety of sound and syllable combinations?

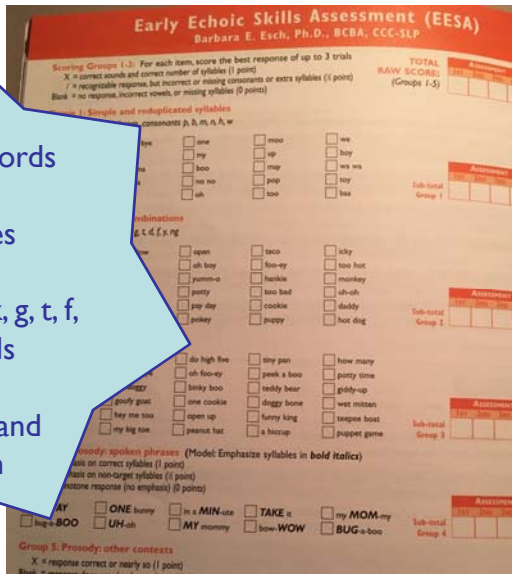
Early Echoic Skills Assessment (EESA)

5 groups of words

1-3 syllables

p, b, m ,n, h, w, k, g, t, f, s, ng, vowels

word stress and intonation



Early Echoic Skills Assessment (EESA)

Administer EESA* to:

Any student who readily approaches you and stays with you to access reinforcement.

Do not place repeated echoic demands if you are not paired with reinforcement!

*See VB-MAPP for administration instructions

Early Echoic Skills Assessment (EESA)

What can the EESA tell you?

- Is there formal echoic stimulus control?
  - Does the child consistently follow instructions to vocally imitate?
- Can the child correctly imitate early syllable structures—moving from simple to complex?
  - Only reflects articulation development up to 30 months of age!
- Can the child imitate speech prosody?

Intelligibility Assessment

Assess intelligibility of tacts and mands when:

…student readily approaches and stays with instructor

and

…there is echoic stimulus control

and

…student has some varied "raw material"

(~Group 1 and at least some of Group 2 on EESA, but not above a total score of 90)

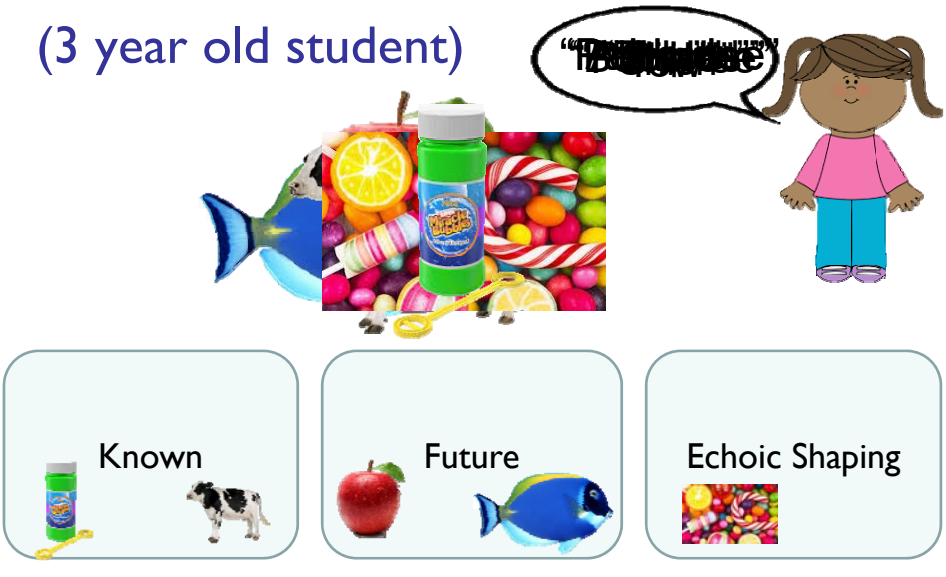
Intelligibility Assessment

- Present various tact and/or mand opportunities.
- Compile 3 different lists of items:

Known Items	Future Targets (mand/tact)	Echoic Shaping Targets
Response is correct and intelligible.	Response is incorrect or unintelligible, but correct and intelligible given echoic prompt.	Response remains unintelligible, even with an echoic prompt.

Intelligibility Assessment Activity

(3 year old student)



Intelligibility Assessment

What can an intelligibility assessment tell you?

- How intelligible is the learner to familiar and unfamiliar listeners?
  - Percent intelligibility
- What types of errors is the learner making in functional communication?
- What are some functional speech targets?

What assessments would you consider?

Video

Assessment Analysis

2. Analyze

Into which profile does the learner fit best?

Assessment Analysis

Profile 1	• vocalizations infrequent • limited repertoire/reduced variability in vocals • no echoic behavior
Profile 2	• echoic stimulus control • limited sound repertoire (e.g., limited vowels) and sound combinations
Profile 3	• echoic stimulus control • variety of sounds and sound combinations • poor intelligibility
Profile 4	• echoic stimulus control • generally intelligible • age-inappropriate articulation errors

*Modified from Esch, 2015

Vocal Training

3. Select Treatment

Profile 1

- vocalizations infrequent
- limited repertoire/reduced variability in vocals
- no echoic behavior

Program goals:

- Increase frequency of spontaneous vocalizations
- Increase variability in vocalizations
- Establish echoic stimulus control

Vocal Training

Profile 1

- vocalizations infrequent
- limited repertoire/reduced variability in vocals
- no echoic behavior

Treatment Options	Purpose
• Reinforce all vocalizations • Differentially reinforce all vocalizations during manding • Stimulus-stimulus pairing (SSP)*	Increase frequency of spontaneous vocalizations
• Vocal variability training (VV)*	Increase variability in vocalizations
• Rapid motor imitation antecedent (RMIA)*	Establish echoic stimulus control

*Modified from Esch, 2015

Vocal Training

Profile 2

- echoic stimulus control
- limited sound repertoire (e.g., limited vowels) and sound combinations

Program goals:

- Strengthen echoic responding
- Increase speech sound repertoire and sound combinations

Vocal Training

Profile 2

- echoic stimulus control
- limited sound repertoire (e.g., limited vowels) and sound combinations

Treatment Options	Purpose
• Differentially reinforce *better* vocalizations during manding • RMIA* • Echoic program for simple sounds and sound combinations*	• Strengthen echoic responding • Increase repertoire of sounds and sound combinations

*Modified from Esch, 2015

Profile 2 Vocal Training Video

Video

Vocal Training

Profile 3

- echoic stimulus control
- variety of sounds and sound combinations
- poor intelligibility

Program goal:

- Increase intelligibility of functional communication

Vocal Training

Profile 3

- echoic stimulus control
- variety of sounds and sound combinations
- poor intelligibility

Treatment Options	Purpose
• Differentially reinforce *better* vocalizations during manding and tacting • Echoic program for shaping tacts and mands*	Increase intelligibility of functional communication

*Modified from Esch, 2015

Vocal Training

Profile 4

- echoic stimulus control
- generally intelligible
- age-inappropriate articulation errors

Program goal:

- Developmentally-appropriate speech

Vocal Training

Profile 4

- echoic stimulus control
- generally intelligible
- age-inappropriate articulation errors

Treatment Options	Purpose
• Differentially reinforce *better* vocalizations during manding and tacting • Echoic program for shaping speech sounds*	Developmentally-appropriate speech

*Modified from Esch, 2015

Profile 4 Note:

"Typically developing children have several hundred spoken words across all verbal functions before they are expected to begin fine-tuning their speech (around age 3), and they have several thousand spoken words before they are expected to acquire adult articulation (around age 8-9). Often, it will be more beneficial for the teacher to shape speech to an intelligible level, rather than an age-appropriate level, if it means that the student will be able to acquire spoken communication faster."

(PaTTAN, n.d.)

Vocal Training Considerations

- Teaching Procedures
  - Treatment Integrity
- Target Selection
- Frequency of Practice

Vocal Training Consideration: Frequency of Practice

- Esch (2015) explains that in order to resemble typical acquisition practice, arrange opportunities for speech practice as follows:
  - Many opportunities (100+)
  - Brief sessions (2-3 minutes)
  - Throughout the day
- "We teachers and parents have to decide: Where is speech acquisition in the ranking of skill and instructional priorities?" (Esch, 2015)

SLP in ABA Classroom:

"SPEECH GROUP"

"Speech Group"

- Why is it important to deliver speech & language therapy in a group?
- What does speech group look like?
- What are your barriers to providing effective intervention in a group?

"Speech Group"

- Challenges
  - Slow progress
  - Lots of problem behavior
  - Poor generalization outside of therapy
- Solutions
  - Use principles of ABA
  - Choose specific, appropriate targets

"Speech Group"

Speech Group: Theme/Activities

- Choose age-appropriate, relevant topics at the appropriate instructional level
- Theme may be repeated daily or weekly for multiple opportunities to practice the skills in the natural environment across settings, instructors, and exemplars

Speech Group: Theme/Activities

- Use your knowledge of student motivation to help with theme & activity selection
  - Songs
  - Books
  - Cooking
  - Gross motor
  - Fine motor
  - Sensory
  - Play

Examples

Video

Speech Group: Reinforcement

- Reinforcement is anything that is provided or removed after a behavior that increases the probability of that behavior occurring again under similar circumstances
- A variable ratio (VR) schedule of reinforcement requires the completion of a variable number of responses to produce a reinforcer

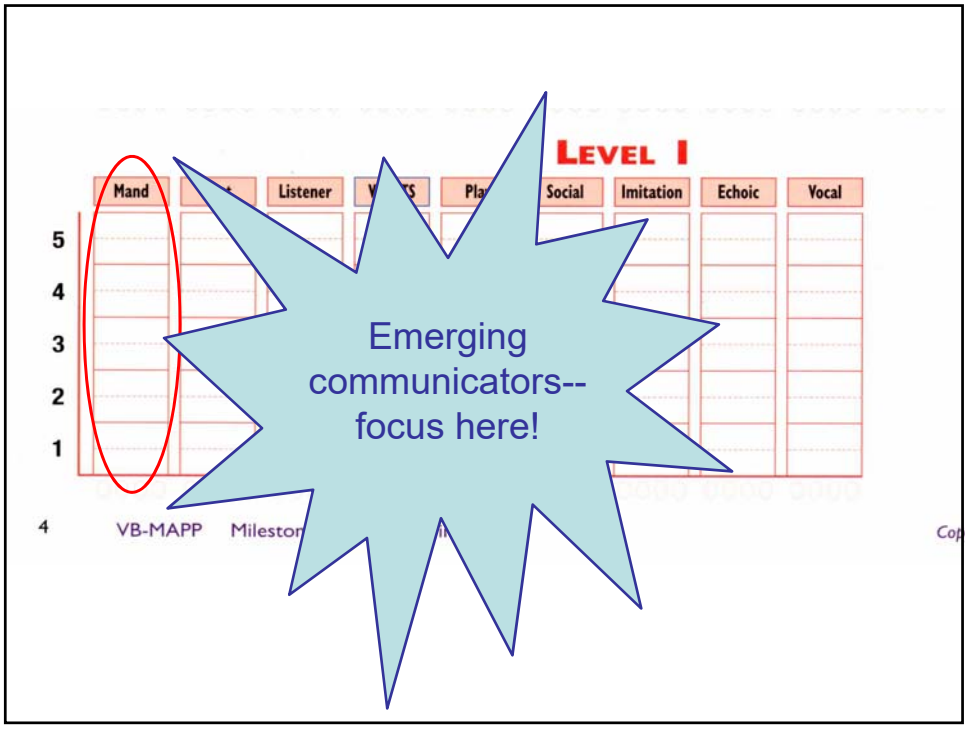
Speech Group: Reinforcement

- Individualize: 3 Vs
  - VR
  - VERMI
  - Variety
- Reinforce target skills and appropriate "group" behaviors
- Systematically fade reinforcement

Video

Speech Group: Selecting Targets

- Clear instructional targets for each student
- Guided by assessment
- Functional
  - Transfer to general education setting, home/community daily life
  - Teach across verbal & related operants

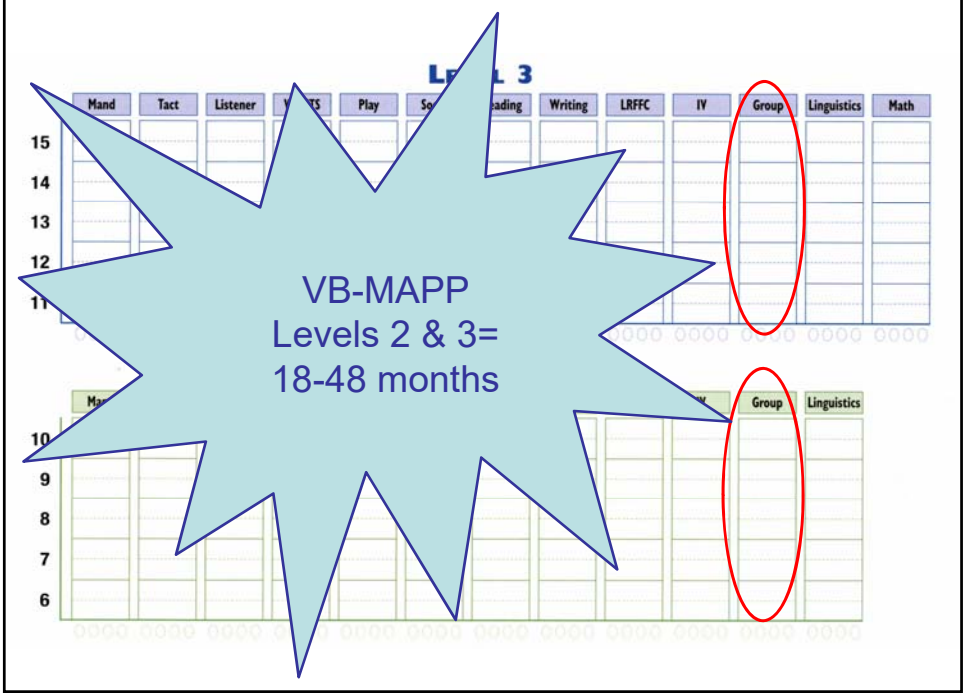


Speech Group: Student-Specific Goals

- Novel Targets
  - Acquiring new behaviors not previously taught in 1:1 conditions
- Generalization Targets
  - Generalization of skills previously taught in 1:1 conditions

Speech Group: General Goals

- High rates of responding/engagement
- Social behavior
  - Waiting/Turn-taking
  - Attending
  - Peer interaction



GROUP SPEECH DATA: Fall/Leaves 2016

*indicates generalization probe from individual therapy

CRITERA FOR MASTERY: 3 CONSECUTIVE "YES" PROBES

Student: _1_____

Target (operant)	T _____	TH _____	T _____	TH _____
Leaf (T)	Y N	Y N	Y N	Y N
Raking (T)	Y N	Y N	Y N	Y N
How old are you? (IV)*	Y N	Y N	Y N	Y N

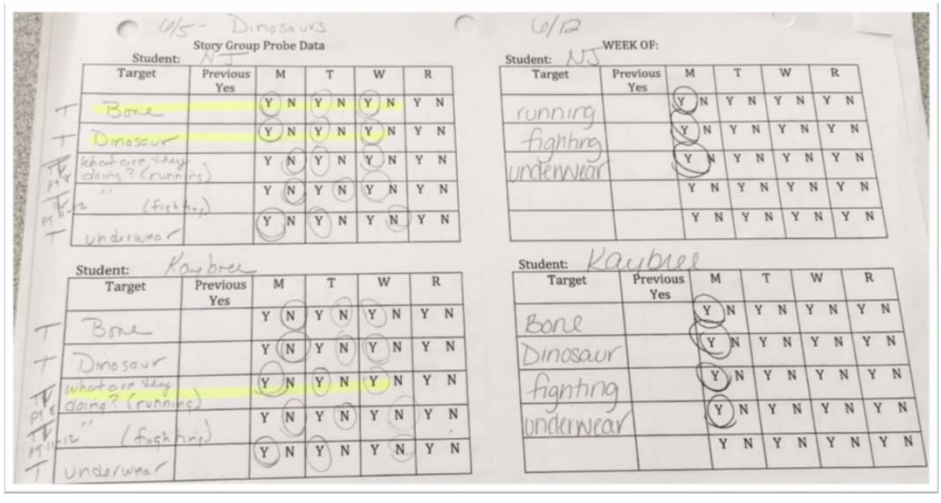
Student: _2_____

Target (operant)	T _____	TH _____	T _____	TH _____
Drop leaf (MI)	Y N	Y N	Y N	Y N
Rake (M)	Y N	Y N	Y N	Y N
Give (LR)*	Y N	Y N	Y N	Y N

Speech Group: Progress Monitoring

- Cold probe (Yes/No) data collection sheet
  - At least 2 targets per student
- *Frequency recording data collection sheets*
- Skills tracking sheets
- Graphs

Video



Story Group Probe Data

Student: NJ

Target	Previous Yes	M	T	W	R
Bone		Y N	Y N	Y N	Y N
Dinosaur		Y N	Y N	Y N	Y N
what are they doing? (running)		Y N	Y N	Y N	Y N
" (fighting)		Y N	Y N	Y N	Y N
underwear		Y N	Y N	Y N	Y N

6/5 - Dinosaurs

6/12

WEEK OF:

Student: NJ

Target	Previous Yes	M	T	W	R
running		Y N	Y N	Y N	Y N
fighting		Y N	Y N	Y N	Y N
underwear		Y N	Y N	Y N	Y N
		Y N	Y N	Y N	Y N

Student: Kaybree

Target	Previous Yes	M	T	W	R
Bone		Y N	Y N	Y N	Y N
Dinosaur		Y N	Y N	Y N	Y N
what are they doing? (running)		Y N	Y N	Y N	Y N
" (fighting)		Y N	Y N	Y N	Y N
underwear		Y N	Y N	Y N	Y N

Student: Kaybree

Target	Previous Yes	M	T	W	R
Bone		Y N	Y N	Y N	Y N
Dinosaur		Y N	Y N	Y N	Y N
fighting		Y N	Y N	Y N	Y N
underwear		Y N	Y N	Y N	Y N
		Y N	Y N	Y N	Y N

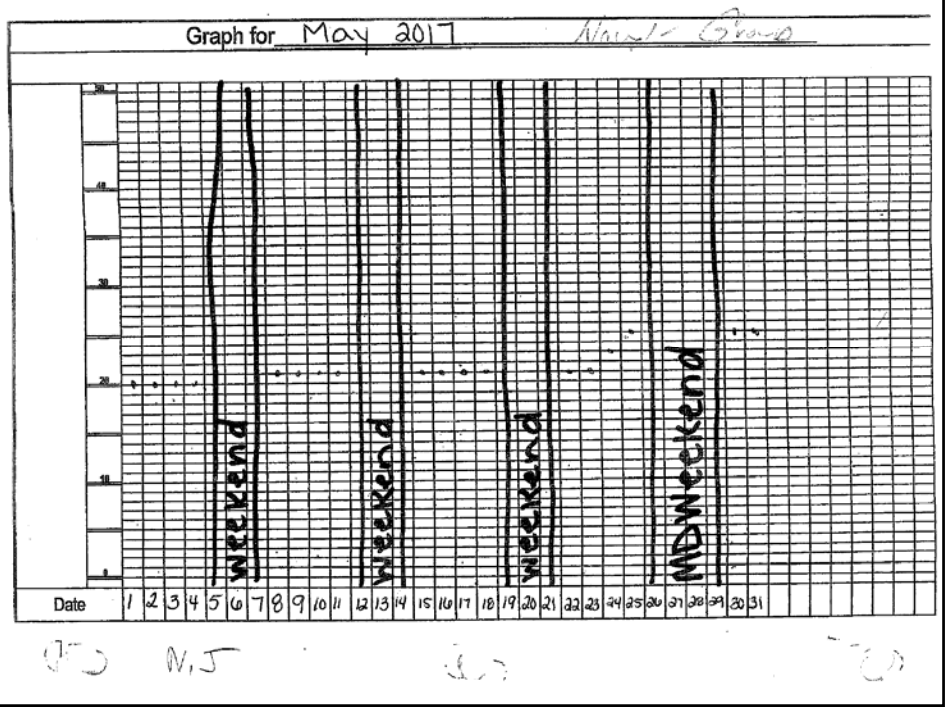
Student: NJ

Goal:

Skills Tracking Sheet

Target: Novel Skills Acquired in Group

	+/-	Date Introduced	Correct out of:	Date Retained/Mastered
1	Snail (T.)	5/8/17		
2	What does a bird do? (fly)	↓	DM	
3	root (+)	5/15/17	5/24/17	
4	stem (+)	5/15/17	5/25/17	
5	leaves (+)	5/15/17	5/24/17	
6	bone (+)	5/30/17	5/25/17	
7	Dinosaur (+)		6/7/17	



Responses per Minute Recording Sheet: record for one minute

Student: ______________________ Activity or Lesson: ______________________

Date: ________________________ Circle: Group Dyad Individual

Code: R+ = correct response R- incorrect response ONR= Opportunity with no response

Circle per Occurrence				
R+ R- ONR R+ R- ONR				
Totals:	R+ =	R- =	ONR =	

*Pattan, n.d.

Following Group and Direct Instructions

Child: ______________________________

Date/ Initials	Group Instruction	Prompts: I: Independent, G: Gestural, V: Verbal, P: Physical	Direct Instruction	Prompts: I: Independent, G: Gestural, V: Verbal, P: Physical
		I G V P		I G V P
		I G V P		I G V P
		I G V P		I G V P
		I G V P		I G V P

*Pattan, n.d.

Speech Group: Teaching Procedures

- For targets, use errorless teaching and error correction procedures
  - When presenting a target skill, use the errorless teaching procedure (Prompt-Transfer-Distract-Check)
  - If student errors, run the error correction procedure (End-Prompt-Transfer-Distract-Check)
- For knowns, use 2s time delay & error correct as needed

Videos

Speech Group: Mastery Criterion

- Novel Targets
  - 3 consecutive "yes" cold probes
    - Adjust as needed for individual students/skills
    - If student probe masters a skill, choose a different target and do NOT plot on your graph
- Generalization Targets
  - Probe Mastered (PM) if "yes" on first cold probe
  - 3 consecutive "yes" cold probes if "no" on first cold probe

GROUP SPEECH DATA: Beach/Ocean 2017
Criteria for mastery: 3 consecutive "yes" probes
*indicates generalization probe from individual therapy

Student: Drew

Target (operant)	Prev. Y	T 7/11/17	TH 7/13/17	T 7/18/17	TH 7/20/17
swimming (Tact action)	0	Y (N)	(Y) N	(Y) N	(Y) N
digging (Tact action)	0	Y (N)	Y (N)	(Y) N	(Y) N
um-bweh-wuh (Echoic)	2	(Y) N	Y N	Y N	Y N

Student: Zach

Target (operant)	Prev. Y	T 7/11/17	TH 7/13/17	T 7/18/17	TH 7/20/17
touch-computer button (LR)	0	(Y) N	Y N	Y N	Y N
*touch-shovel (LR)	0	(Y) N	Y N	Y N	Y N
fish (Mand)	0	Y (N)	Y (N)	Y (N)	(Y) N

Student:

Mastery Criteria: 1 yes probe for generalization; if no, 3 consecutive yes'

Skill Tracking Sheet

Skill: Group speech-IT generalization

	Target	Date introduced	Date Mastered
1	turn page in book (MI)	7/12/17	Probe Mastered
2	close book (MI)	7/12/17	7/24/17
3	you read a…book (IV)	7/12/17	Probe Mastered
4			
5			
6			
7			

Speech Group: Data Based Decision Making

- Review data on a regular basis to determine need for instructional change
- If a student is demonstrating difficulty with mastery:
  - Adjust prompts or reinforcement
  - Increase frequency of instruction
  - Provide more practice in discrete trial instruction across multiple exemplars
  - Re-examine assessment/target selection

Speech Group: Other Keys to Success

- Clear expectations (rules and routines)
- Organized materials & reinforcers
- Group size/composition/duration/location
- Fade-in demands and end with success
- Fast-paced instruction
- Allocate sufficient time for teaching targets
- Make participation easy (80/20 ratio)
- Fidelity checks
- Managing support staff
- Family engagement

Videos

GROUP INSTRUCTION
Procedural Fidelity Checklist

Date: _____ Instructor: _____ Student: _____

Observer 1: _____ Observer 2: _____ IOA% _____

	YES	NO	N/A
1. Are students sitting quietly and appropriately with eyes and body oriented toward the group leader?			
2. Are students actively engaged and frequently responding?			
3. Are students attending to, following, and participating in group instruction with the appropriate amount of prompting?			
4. Are students positioned in a semi-circle facing the teacher and with a non-distracting area behind the teacher?			
5. Are lower performing students positioned in the center of the semi-circle?			
6. Is staff standing or sitting behind the student(s) assigned to them?			
7. Does staff reinforce appropriate behavior while being as unobtrusive as possible?			
8. Is staff using prompts to help student(s) remain on task?			
9. Does staff implement behavioral interventions as quietly and unobtrusively as possible and allowing the group leader to continue to lead?			
10. Does staff always remain focused on their student(s)?			
11. Does staff refrain from participating in group unless directed by the group leader?			
12. For motor skills, does staff prompt the learner from behind to ensure that the learner is maintaining proper positioning and fade physical prompts as mastery is achieved?			
13. Does staff attend to even mild problem behavior such as looking away, automatic reinforcement behaviors (rocking, fidgeting with clothing, leaning out of the seat, day dreaming, non-responses, etc.…)?			
14. Does the group leader always present the S^D (instruction, directions, etc.)?			
15. Does the instructor provide opportunities for group/choral responses (using a cue)?			
16. Has the group leader identified easy targets that all students can respond to so that many responses involve S^D's indicative of students responding together ("everyone touch your head")?			
17. Does the group leader reinforce students on their set VR for behaviors during group activities?			
18. Does reinforcement always come from the group leader?			
19. Has the group leader established clear targets for each student?			
20. For a skill that has not been mastered, does instructor use errorless procedures?			
21. If a student errors, does instructor run error correction procedures?			
22. Is the group instruction "topic" relevant and at the appropriate instructional level?			
23. Is data recorded as necessary?			
24. Is the time allotted from group appropriate for the age and assessment performance levels of the students in the group?			
25. Is there general engagement (75% or higher across the group and with each individual student)?			
Notes:	____ / 25 Percentage of Y's:		

*Pattan, n.d.

NATURAL ENVIRONMENT TEACHING
Procedural Fidelity Checklist

Date: _____ Instructor: _____ Student: _____

Observer 1: _____ Observer 2: _____ IOA% _____

	YES	NO	N/A
1. Is the instructional area neat and clean?			
2. Are all needed materials organized and ready?			
3. Does instructor begin promptly?			
4. Does instructor follow the motivation of student?			
5. Does the instructor use appropriate level of enthusiasm?			
6. Does the instructor mix the verbal operants?			
7. Does the instructor use errorless teaching with appropriate time delay?			
8. Does the instructor average 4-5 responses per minute?			
9. Does the schedule indicate recommended time per day in NET?			
10. Is the NET data sheet available?			
11. Is NET data being taken?			
12. Is NET data being graphed?			
13. Does positive reinforcer compete with negative reinforcement or automatic reinforcement?			
14. Does instructor pair social reinforcement with the tangible items?			
15. Does the instructor correctly implement extinction procedures?			
16. Does the instructor maintain composure during procedures?			
17. Does the instructor accurately record behavior data?			
18. Does the instructor implement effective antecedent interventions?			
19. Does instructor re-present S^D followed by 0 second time delay after errors?			
20. Does instructor return to target several trials later?			
21. Does instructor require the correct response?			
Notes:	____ / 21 Percentage of Y's:		

3 minute sample of responses across verbal operants

Mand	Tact	Receptive	Intraverbal	Motor Imitation	Echoic

Responses per minute: ____ seconds per interval

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

*Pattan, n.d.

SPEECH & LANGUAGE
Miss Courtney

Week of: 5/30/17

- On M, T, W, Th during individual sessions we:

mand (request)	
tact (name/label)	
listener responding (follow directions)	
visual perceptual matching-to-sample	
motor imitation ("do this")	
echoic (say "_____")	
intraverbal (fill in the blank)	

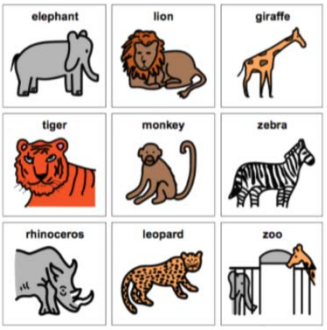
- On Tuesday & Thursday in group we focused on the following concepts and goals:
  - Read *At the Zoo, Yahoo!*, counted, named, and matched pictures of animals
  - Matched zoo animals in a puzzle and imitated zoo animal actions/sounds
  - Receptively identified animals in the "I hear Ewe" iPad app and listened to/imitated the sounds they make

mand (request)	*puzzle pieces, animal names*
tact (name/label)	*zoo, elephant, lion, giraffe, tiger, monkey, zebra, rhino, leopard*
listener responding	*find the _____ (animal)*
matching to sample	*elephant, lion, giraffe, tiger, monkey, zebra, puzzle*
motor imitation	*make fists, arms up overhead (for yahoo!)* *point (extend arm and point index finger, as in "look!")* *animal actions (act like an elephant, monkey, etc.)*
echoic (say "_____")	*yahoo!, animal sounds*
intraverbal	*A monkey says...(oo-oo-ah-ah)* *A lion says...(roar!)*

Other: See reverse.

SPEECH & LANGUAGE
Miss Courtney

Zoo Vocabulary



Week of:

Group Speech Notes

Receptive Language
- ☐ Picture Identification
- ☐ Action Identification
- ☐ Matching
- ☐ Motor Imitation
- ☐ Following Directions
- ☐ Use of Visual Schedule

Expressive Language
- ☐ Manding/ Requesting
- ☐ Tacting/ Labeling
- ☐ Intraverbals/ Fill ins
- ☐ Increasing Sentence Length
- ☐ Answering questions

Pragmatic Language
- ☐ Taking Turns
- ☐ Sharing
- ☐ Active Listening

Our Theme This Week:

Book We Read:

Song(s) We Sang:

Activities We Completed:

Special Snack:

Other Notes:

SPEECH & LANGUAGE
Miss Liz & Miss Bridget

During speech we followed the theme *Apples* while with the following activities:

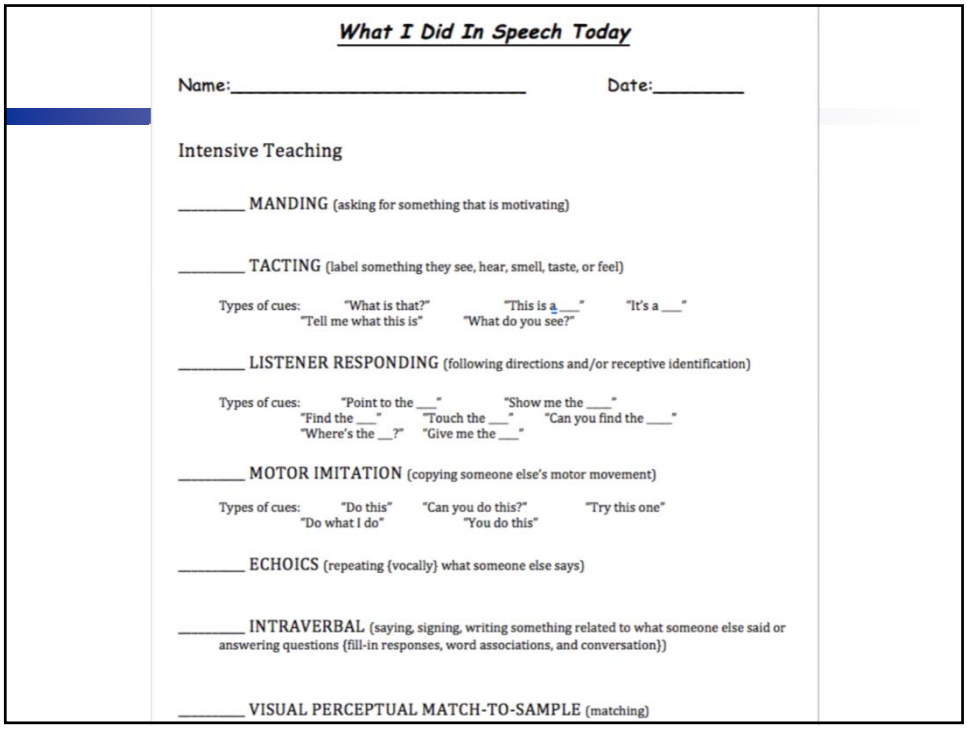
- Read book: "Ten Red Apples" by Pat Hutchins
  - Labeled vocabulary in the book: farmer, apple, farm animals (e.g., horse, cow, pig, sheep)
  - Answered wh questions (e.g., who lives on the farm? What is on the tree?)
  - Took turns following directions to "feed the animals" an apple
- Sang "Way Up High in the Apple Tree"
  - Practiced counting (1-5)
  - Followed directions to act out the song (shaking)

Ideas for at-home practice:

- Sing "Way Up High in the Apple Tree" together. Find it online on youtube.
- There are many apple and fall related activities that you can do with your child. For example, you can go to an apple orchard to pick apples, bake an apple pie, visit a pumpkin patch or go on a hay ride! Try to embed as much language as possible into these activities. To work on expanding vocabulary, label and talk about the things that you see. Describe what you are doing and what is happening around you (e.g., picking apples, cutting apples, rolling dough). Follow simple directions (e.g., put apple in bucket) or more complex directions (e.g., first wash the apple, then put it on the table).

Student: Week of:

INDIVIDUAL SPEECH NOTES		GROUP SPEECH NOTES	
Receptive Language	**Expressive Language**	**Receptive Language**	**Expressive Language**
☐ Picture ID	☐ Requesting/manding	☐ Picture Identification	☐ Intraverbals/Fill-ins
☐ Action ID	☐ Fill-ins	☐ Vocabulary (category, function, feature, location, pronouns, body parts, etc.)	☐ Increase sentence Length
☐ Vocabulary (category, function, feature, location, pronouns, body parts, etc.)	☐ Answering questions	☐ Action Identification	☐ Answering questions
☐ __ Step directions	☐ Asking questions	☐ Following directions	☐ Asking questions
☐ Imitating motor movements	☐ Increase sentence Length	☐ Imitating motor movements	☐ Manding/requesting
	☐ Labeling		☐ Tacting/labeling
Articulation		**Pragmatic Language**	
Target: _____	☐ Isolation ☐ Syllables ☐ Words ☐ Phrases ☐ Sentences ☐ Conversation	☐ Turn taking ☐ Sharing ☐ Active listening ☐ Greeting	
Other Notes		**Other Notes**	



What I Did In Speech Today

Name:_____ Date:_____

Intensive Teaching

_____ MANDING (asking for something that is motivating)

_____ TACTING (label something they see, hear, smell, taste, or feel)

Types of cues: "What is that?" "This is a ___" "It's a ___"
"Tell me what this is" "What do you see?"

_____ LISTENER RESPONDING (following directions and/or receptive identification)

Types of cues: "Point to the ___" "Show me the ___"
"Find the ___" "Touch the ___" "Can you find the ___"
"Where's the ___?" "Give me the ___"

_____ MOTOR IMITATION (copying someone else's motor movement)

Types of cues: "Do this" "Can you do this?" "Try this one"
"Do what I do" "You do this"

_____ ECHOICS (repeating {vocally} what someone else says)

_____ INTRAVERBAL (saying, signing, writing something related to what someone else said or answering questions {fill-in responses, word associations, and conversation})

_____ VISUAL PERCEPTUAL MATCH-TO-SAMPLE (matching)

Speech Group: Activity

- Theme/Activities:
  - Activities
  - Materials
- Reinforcers:
  - Classification
  - Schedule
- Goals:
  - Targets
  - Data collection
- Other Keys to Success:
  - Group size/duration
  - Staff/Student expectations

SLP in ABA Classrooms: Conclusion

- Empirically-validated treatments and teaching procedures
- Measurable outcomes
- Faster progress
- Consistency with AAC
- Carryover of skills outside of "therapy"
- Less problem behavior

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Contact Information

www.pattan.net

- Liz Willis
  elizabethwi@cciu.org
- Courtney Devlin
  courtneyd@cciu.org
- Heather Forbes
  c-hforbes@pattan.net
- Debi Namey
  dnamey@pattan.net
- Jaime Baker
  c-jbaker@pattan.net
- Sheri Saurer
  ssaurer@pattan.net
- Amy Foor
  c-afoor@pattan.net

Commonwealth of Pennsylvania

Tom Wolf, Governor

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Contact Information

www.pattan.net

- Courtney Devlin
  courtneyd@cciu.org
- Liz Willis
  elizabethwi@cciu.org
- Heather Forbes
  c-hforbes@pattan.net
- Debi Namey
  dnamey@pattan.net
- Jaime Baker
  c-jbaker@pattan.net
- Sheri Saurer
  ssaurer@pattan.net
- Amy Foor
  c-afoor@pattan.net

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DEPARTMENT OF EDUCATION
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Tom Wolf, Governor