Role of the Speech-Language Pathologist in the ABA Classroom: Inter-professional Collaboration

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Pennsylvania Training and Technical Assistance Network

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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.

What is Applied Behavior Analysis?

- ABA
 - The scientific analysis of human behavior
 - ABA over 70 years old, with trace areas over 100 years old
 - Modern founder: B.F. Skinner
- Applied behavior analysis (ABA) is a science and a discipline devoted to understanding and improving human behavior.
- The purpose of ABA is to improve socially significant behavior (i.e. language, academic skills, social skills, daily living, self care, recreation and leisure behaviors).

ABCs of ABA

- A = Antecedents: What happens before behavior
 - Motivation
 - Discriminitive Stimuli (Sd)
- **B = Behavior:** What person does. Must be able to observe it and measure it
 - An person sits down
 - An individual says "cookie"
- **C = Consequences** What happens after behavior
 - Reinforcement
 - Punishment

ABCs: examples

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

Behavior

- Behavior is anything that is measurable/observable
- Language is observable and measurable
 - Consider all interactions in relation to behavioral events
 - The ABCs of ABA can be applied to language

Verbal Behavior

- Skinner's Analysis of Verbal Behavior
- "Verbal Behavior is behavior that has been reinforced through the mediation of other persons"

Verbal Behavior

Want water---Say water---Person delivers water
Sign water
Point to water
Exchange a picture
Write the word water

Why do we say what we say?

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

Verbal Operants

Verbal Operant	Antecedent	Behavior	Consequence		
Mand	Motivative Operation (wants cookie)	Verbal Behavior ("says cookie")	Direct Reinforcement (gets cookie)		
Tact	Sensory Stimuli (smells or sees cookie)	Verbal Behavior ("says cookie")	Non specific reinforcement (example, gets praised)		
Intraverbal	Verbal Stimulus (Someone says "What do you want to eat?")	Verbal Behavior ("says cookie")	Non specific reinforcement (example, gets praised)		

Verbal Operants (continued)

Verbal Behavior	Antecedent	Behavior	Consequence		
Echoic	Verbal Stimulus Someone says cookie	Verbal Behavior Says all or part of antecedent ("says cookie")	Non specific reinforcement (example, gets praised)		
Listener Response (receptive) (actually not a verbal operant)	Verbal Stimulus Someone says "touch cookie"	Non verbal behavior Child touches the cookie	Non specific reinforcement (example, gets praised)		

What Does an ABA Classroom Look Like?

- Assessment guided instruction
- Evidence based teaching procedures based on the principles of ABA
 - Discrete trial training (errorless teaching and error correction procedures); one-on-one instruction in which each trial involves an antecedent, behavior, and consequence.

What does an ABA classroom look like?

- Mand Training
- Positive reinforcement
 - We should focus just as heavily on increasing desired behaviors as decreasing less desired behaviors.
- Collaboration
 - Team approach

Team Approach

- Collaboration of all team members is critical to an ABA classroom
- Team members include:
 - Classroom teacher
 - Paraprofessionals
 - Parents
 - Board Certified Behavior Analysts (BCBAs)
 - Speech Language Pathologists
 - Occupational Therapists
 - School Psychologists
 - School Administrators

Overview

- Background
 - Caseloads
 - Journey in ABA training/collaboration
- Collaboration
 - Scheduling
 - Assessment
 - Goal Development
 - Staff Training
 - Maintaining Professional Relationships

Common Misconceptions

Myths

- Balancing caseloads are easy
- ABA based classrooms are only for students with autism
- SLP's only work on articulation

Reality

- · Caseloads are large!
- ABA classrooms include students with:
 - emotional support/developmental delays
- SLP's have wide scopes of practice
 - Articulation, language, fluency, voice, feeding/swallowing and more!

Nicole's Caseload

- 3 Districts
 - 2 Elementary Schools
 - ABA Support Classrooms
 - Students with hearing impairments or other complex learners
 - I Junior High School
 - ABA Support Classroom
 - Students with hearing impairments
 - I High School
 - Life Skills Classroom
 - Students with articulation and/or language needs

The SLP as a Team Member

Nicole's Journey in ABA Training

- Intensive Skill Training July 2015
- Trained by internal coach and consultants- 2015-16 school year
- Vocal Shaping Training
 - Observed Sheri Saurer September 2015
 - Vocal Training Webinar October 2015
 by Barbara Esch, Ph.D. BCBA-D, CCC-SLP
- Intermediate and Advanced Verbal Programs Training January 2016
- Establishing Basic Skill Sets Training June 2016

Intensive Skill Training

- 3 day training
- · Identifying verbal operants
- Developing classroom schedules and card sort systems
- · Procedures for intensive teaching
- · Basic mand training
- VB-MAPP assessment tool
- Establishing instructional control
- Reducing problem behavior

Intermediate and Advanced Verbal Programs Training

- Complex tacts
 - actions, adverbs, adjectives, prepositions, two or multiple word component tacts
- Listener responding
 - By feature, function and class
- Intraverbal webbing
- Responding to "yes/no" questions

Establishing Basic Skill Sets Training

- Initial mand repertoire
- Initial imitation skills
- Basic listener responding skills
- Early tact responses
- Establishing early instructional control
 - Shaping and pairing instruction

The SLP as a Team Member (Continued)

- Sherri's journey
- Attended multiple trainings in autism and ABA throughout the course of her career, including behavior, manding, vocal shaping trainings prior to a newer teacher in the school district seeking out the autism initiative

The SLP as a Team Member (Continued)

- Sherri:
- Worked with the first classroom in the district to be part of the initiative for a year prior to being assigned internal coach position.
- Attended 3 day Intensive skills training (bootcamp) in July 2016

The SLP as a Team Member (Continued)

- Sherri:
- Worked with the initial classroom and the second classroom to be included in the initiative as internal coach and SLP for those students during the 2016-2017 school year

Key Components to Successful Collaboration

- Scheduling
- Assessment
- Goal development
- Staff Training
- Maintaining Professional Relationships

Service Delivery Models

Pull Out Model

 Take students out of
 Provide treatment the classroom and provide treatment in an classroom office

Push In Model

within the student's

Service Delivery Models: Comparison

Pull Out Model

- Loss of instructional time
 - Transitioning
- Less collaboration
- Limited generalization across instructors

Push In Model

- Increases instructional time
- Increased collaboration
 - Teacher
 - Support staff
- Generalization of skills across operants and instructors
- Pair and fade in demands with students in familiar environment

Before Collaboration...

- Pull out model
- · Problem behaviors during transitions and sessions
 - BSC/TSS intervention
- Minimal collaboration
 - Staff had paperwork "breaks" while I pulled-out
 - Separate from consultation
 - Did not fully understand consultation notes
- Minimal progress



Turning Point for Nicole: Internal Coach

- Provided Training & Coaching:
 - Pairing myself with reinforcement
 - Manding
 - Managing challenging behaviors
 - VB MAPP
 - Consultation notes
- Vocal Shaping
 - Connected with local resources
- Advocated for me
 - Share expertise
 - Co-Internal Coach



Where I Am Now-Nicole

- Push in model
- · Challenging behaviors decreased
- Collaborating
 - Internal coach
 - Active participant in consultation process
- Students making progress!!!
 - IEP goals aligned with VB MAPP



Where I Am Now-Sherri

- IEP goals are shared with the AS teacher and progress monitoring and reporting for those goals are shared. Language and verbal goals are based on the VB-MAPP.
- · Attend consultations.
- · Consult with all AS team members.
- Decrease in challenging behaviors in all environments.
- · Measurable increase in communication and language skills.
- Process is now truly a collaborative team process. There is a consistency
 when students change AS classrooms that did not exist before. The
 entire IEP team is focused more on language and communication, and
 communication has become more than "just something they do in the
 speech room."
- For the first time in 14 years, I feel like I am part of the team.

Video

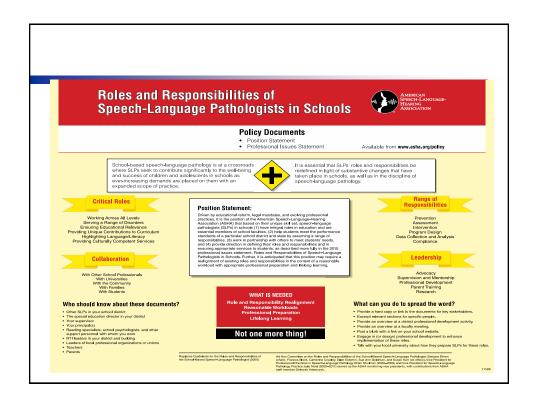


File: JF SLP Int Coach



Q. What changed?

A. Collaboration



Schedule



Some of my responsibilities:

- Direct services
- Indirect services
 - Write IEPs/Goals/Progress reports
 - Collaborate with teachers
 - Conduct staff trainings
 - Conduct session trainings
 - ACCESS billing

Schedule Continued...

How do I fit in all of my responsibilities?

- •PUSH IN, PUSH IN, PUSH IN!!!!
- •Advocate for time as an indirect service provider (internal coach)
 - Explain, model, coach
 - Share your expertise with staff and administration
 - Benefit to students
 - Benefit to staff
 - Benefit to district



Schedule Continued...

- Advocate for scheduling flexibility
 - Present DATA to administration
 - VB MAPP
 - Graphs of student data
 - Site review scores
 - Fidelity checklists

Schedule Continued...

- Schedule a block of time based on the number of students on caseload in the classroom(s).
- Schedule a one to two minute transition between one student to another.
 - This will eliminate travel time between office and classroom allowing for additional time for other students or duties.
- Speech Language Pathologist can provide treatment in the presence of Paraprofessionals and/or teachers so that training can be conducted (Vocal shaping, teaching signs, etc.)

Blended Model (Push –in and Pull-out together)

- Sherri, Current scheduling model
- To address scheduling needs and transitioning within district from strictly pull-out to more push-in services, I currently blend the two models for my students in the ABA program.
- Schedule period of time to run manding and IT sessions within the classroom for one of the times per week.
- Another contact per week is a full group language lesson in which instruction is differentiated for all students (when scheduling permits, OT is also included in this activity, usually one time per month).

Blended Model-(Push –in and Pull-out together) Cont.

- To focus specifically on articulation and teaching vocabulary in other environments, some student continue to receive a pull-out session.
 - To address transition difficulties, I first build a rapport with the students by pairing myself and the speech room with positive reinforcement.
- Dependent on student level and social skills abilities, some student receive pull out sessions paired with a speech-only general education peer as a social role-model.
- Grouping higher level students with other peers that are not in the AS program provides a lot of opportunity for social interaction. (Peer to peer manding)

Assessment Guided Instruction

Assessment Guided Instruction

 Programming, goals selection, and objectives selection are based on a behavioral assessment of language such as the VB-MAPP (Verbal Behavior Milestones Assessment and Placement Program)

VB MAPP

- Not standardized
- Criterion referenced
- Emphasis on program planning and guiding instructional targets for behavioral interventions
- Derived from B. F. Skinner's analysis of verbal behavior (1957)
- Emphasis on analysis of response form and function
- Also addresses social functioning, group instruction, play, early reading and math
- Published edition color coded, well organized, easy to follow
- Fairly technical presentation of model: Dr. Sundberg tried to keep it simple without reducing technical adequacy

Why the VB-MAPP?

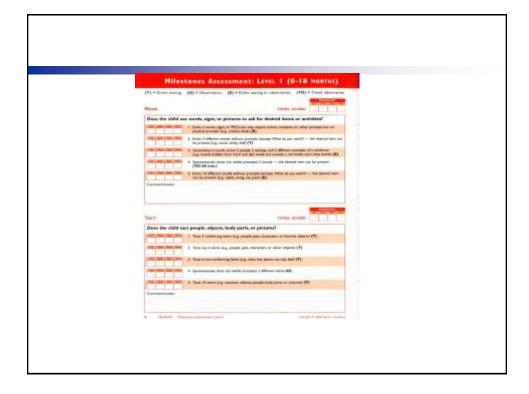
- Few assessment instruments exist that assess language skills based on function
- Efficiency of assessment: the VB-MAPP is designed to be easy and time efficient to administer
- Allows more detailed analysis of skill sets at the operant level (task analysis) when needed
- · Links to typical development
- Includes components that can assist in trouble shooting instruction and aiding in transition to less restrictive environments

Levels are Linked to Developmental Sequences

- Level I = 0-18 months
- Level 2= 18-30 months
- Level 3= 30-48 months

Developmental levels determined by language samples of typical children and calibrated with normative samples from other established language instruments. Age ranges are approximate.

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Administration of VB MAPP

- Who can administer?
 - Classroom teachers
 - BCBAs
 - Speech Language Pathologists
 - School Psychologists
 - Can administer with other members of the team:
 - One person may be assessing the student and the other is recording the data.
 - Collaboration with other team members while administering or administering at different times, complete reliability checks to ensure scoring is reliable.

Identify the response form

- Assess student skills utilizing the VB MAPP
 - Echoic and imitation are central
 - EESA (echoic assessment within the VB MAPP)
 - Vocal first
 - Other augmentative systems:
 - Sign language
 - Picture Exchange
 - Augmentative devices
 - Speech generating
 - Writing

Emphasis on Echoic Behavior

 Since phonemes and syllable units are the building blocks of vocal verbal behavior, any attempt to increase their frequency and variety in young children who do not develop them typically might lead to a greater likelihood of developing vocal behavior.

SLP's Role in Assessment

- SLPs as a team member in an ABA classrooms are critical in the following areas:
 - Completing and scoring the EESA
 - Can assist or administer other areas of the VB MAPP
 - Tact
 - Mand
 - Imitation
 - Listener Response
 - Intraverbal
 - Listener Response Feature, Function, Class
 - Social

SLP's Role in Assessment

- Assist in determining the response form based on VB MAPP results
- Communicating to the team the results of the VB MAPP score indicates student's language levels.
 - Consideration of VB MAPP scores when determining curriculum, placement, and behavior concerns
 - Form and function

Assessment and Systematic Instruction (Goal Development)

- Based on VB MAPP results the team will work together to identify meaningful goals to directly address social communicative deficits and teach basic foundational skills (what to teach).
- Foundational skills allow for teaching and establishing more complex skills

Assessment and Systematic Instruction (Goal Development)

- Assessment and the creation of goals/objectives utilizing the VB-MAPP allows for language intervention that addresses both form and function.
- Utilizing evidence based teaching procedures based on the principles of ABA
 - Discrete trial training (errorless teaching and error correction procedures); one on one instruction in which each trial involves an antecedent, behavior, and consequence.
 - Mand training
 - Positive reinforcement

SLPs Role in Assessment (Sherri)

- Assist with VB-MAPP assessment. Complete all of the EESA assessments (or supervise a student extern) as the most trained listener on the team. Assist in all other portions of the assessment.
- Provide guidance and assistance in scoring the overall assessment.

SLPs Role in Assessment (Sherri)

- Facilitate team interactions among all teachers involved in the initiative and assist team in advocating for the initiative with administration, particularly in using assessment data to guide AS classroom assignments.
- Assist in kindergarten transition process and evaluation process for placement of students in AS classrooms based upon levels of need upon entry in kindergarten.

SLPs Role in Assessment (Nicole)

- Identification
 - El students transition to kindergarten
 - Students in other settings who may be struggling to acquire functional language skills
- Link between the ABA support classrooms and special education directors, school psychologists, etc.

- VB MAPP
 - Manding
 - EESA
 - Assist with additional sections
- Observations
 - Language samples
 - Sound inventory
 - Peer interactions
 - Instructional control
 - Rate of reinforcement
 - Possible antecedents to challenging behaviors

Goal Development Prior to Collaborating

- Speech goals that were distinct from classroom instruction
 - Articulation goals
 - Increasing utterance length
 - Answering WH questions
 - Phonological awareness
 - Goals relating to AAC
- · Goal development was difficult!

Goal Development with Collaboration

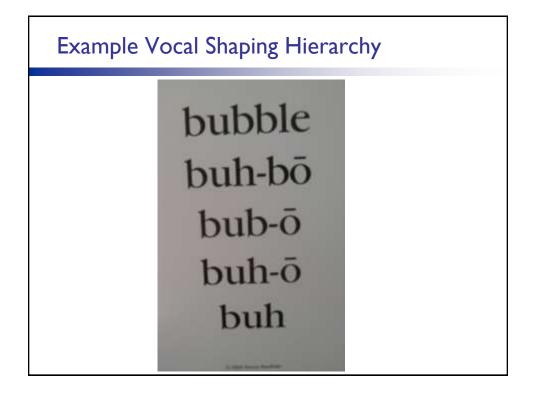
- VB MAPP results guide academic and speech goals:
 - Manding
 - Echoic skills
 - Tacting
 - Listener responding
 - Intraverbal
 - Motor imitation
- Assessment aids in selection of communication modality:
 - vocal, sign, PECS or SGD

Goal Development with Collaboration

- Manding
 - Goals
 - Items
 - Actions
 - Missing items
 - Peer-to-peer manding
 - Target selection

- Echoic Skills
 - Expanded through vocal shaping
 - Target selection
 - Develop hierarchy

Mand Sequence Chart							
MAND SEQUENCE, CHART Hand AME Add to the most of most of all the most of the							



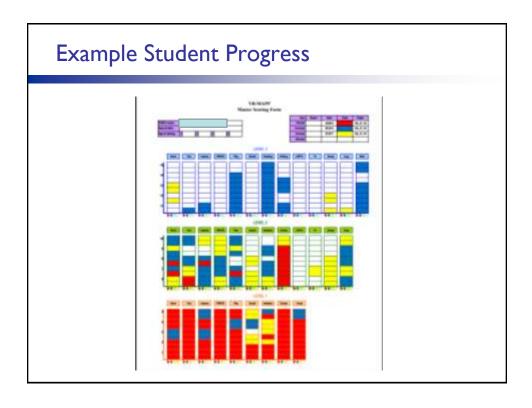
Goal Development with Collaboration

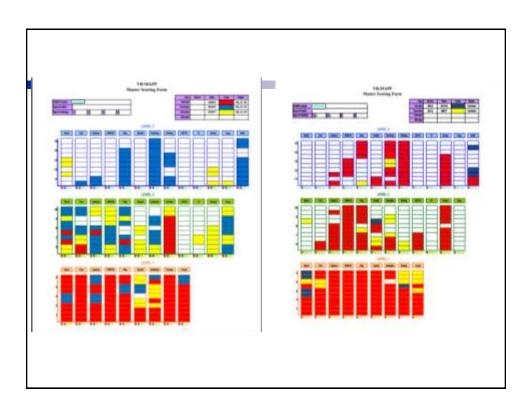
- All goals are based on DATA
- Changes to goals are based on DATA
- Integrated team model for selecting and implementing goals
 - Everyone works on the same goals
 - Collaborative effort rather than separate/divided
- Progress means this approach is working!
 - Student VB MAPP scores
 - Ability to meet site review criteria



ARIN IU 28 Site Review Scores 2016-2017

Site	Fall 2016	Spring 2017	When PaTTAN consultation began			
District I	55	78	September 2015			
District 2	84	98	September 2014			
District 3	83	93	September 2014			





Goal Development (Sherri)

- Goals are now based on VB MAPP scores
- Goals include improving skills in manding, tacting, listener responding, intraverbals, echoic skills, to name a few.
- Manding goals often include skills such as manding for items/actions/missing items/peer to peer manding
- Echoic skills are expanded through vocal shaping procedures which I create goals for.
- I also assist in helping the team decide the most appropriate and effective communication modality (sign, PECS, SGD, or vocal) based off the assessment.

Video



File: SH ABA Trained Staff

Training

SLP's Role in Training

Who?

- •SLPs can train a wide variety of team members:
 - Classroom Teachers
 - Paraeducators
 - Other SLPs & related service providers
 - Parents
 - Therapeutic Support Staff

SLP's Role in Training

WHAT?

- •SLPs can train on a wide variety of topics
 - Instructional delivery (intensive teaching, manding, etc.)
 - Assessment (VB MAPP)
 - Vocal shaping
 - Basic concepts of Applied Behavior Analysis and Verbal Operants
 - Shaping Signs
 - Many more (e.g., instructional control, pairing, reinforcement, etc.)

SLPs Role in Training

When/Where?

- •Regularly schedule team meetings
 - Before students arrive/after dismissal.
- During scheduled speech sessions
 - Model during direct service time
- •Group students to free up staff for training
 - Reinforcement identification or NET lesson
- •In-Service
 - If permitted by district

SLPs Role in Training

Why?

- •Team Meetings
 - Avoid procedural drift
 - Ensure everyone is on the same page
 - Read and review consultation notes asap
- •Group Staff Trainings (1st)
 - Beneficial if everyone is learning a new skill
 - Example:
 - All staff is receiving the same information
- •Individual Team Member Training (2nd)
 - Target specific skill
 - Example:



Sample Internal Coach Log (with initials for accountability) Internal Coach Log Subset Subset Practice Areas (list protected Values (, student and studies Insulated) Tracticing Topics Tracticers Internal Tracticers Internal Coach (Corrult Birther) Tracticers Internal Coach (Corrult Birther)

SLP's Role in Training

How?

Steps:

- I. Explain rationale
- 2. Model procedures
- 3. Coach staff member as she/he performs the procedures
- 4. Complete fidelity checks

Encourage all staff to participate in consultation

How? Continued...

- Fidelity Checks
 - Checklist of the procedures
 - Complete while observing individual staff members or immediately after the observation
 - Ensure that all staff are implementing the procedures as recommended and consistently

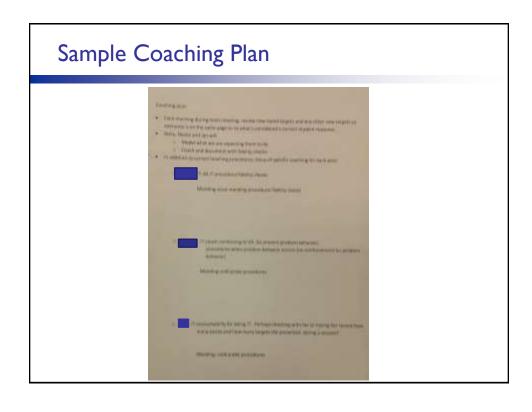
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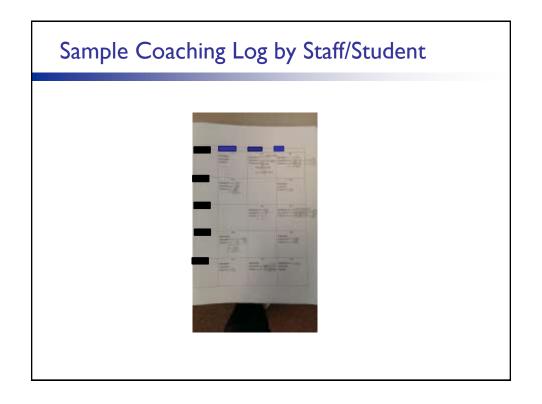
TIPS ON FEEDBACK:

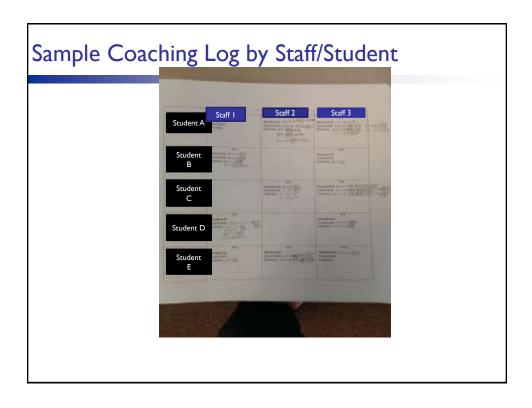
- More positive than negative
- · Give feedback right away
 - More meaningful
 - Answer questions
 - Memory is fresh
 - Can model again immediately after feedback

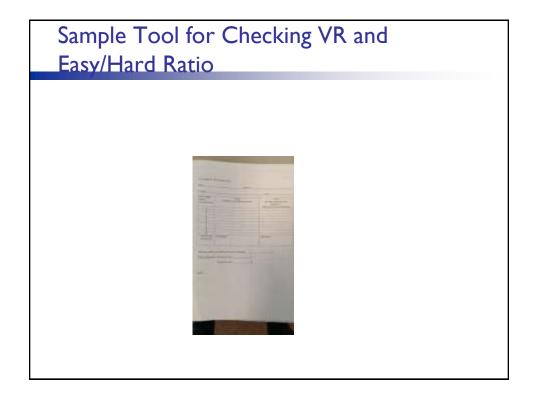
How? Continued...

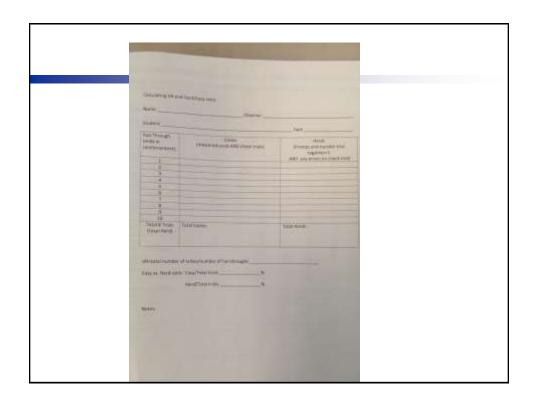
- •Individualize Staff Training Needs:
 - By classroom needs
 - Based on site review
 - By individual staff member needs
 - Based on fidelity checks

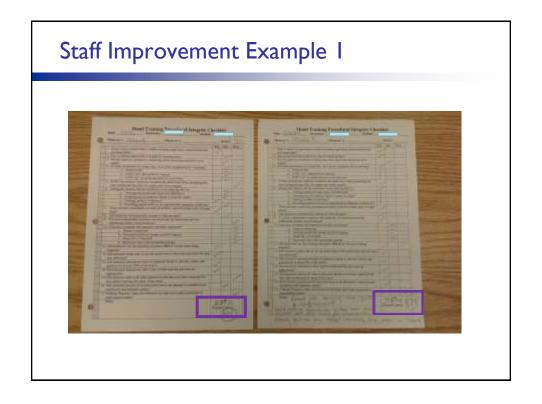




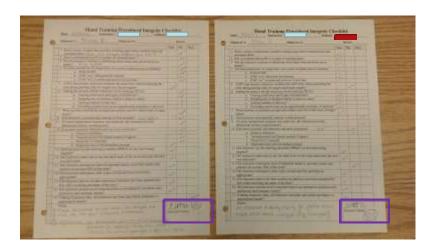








Staff Improvement Example 2



Staff Training (Sherri)

- Our district is just entering third year of the initiative. Staff training is one of our goals for the upcoming year.
 - Currently training occurs during team meetings or inservices as district allows
 - Staff observes during sessions with teacher and myself
 - District plans to provide more formalized training this upcoming school year, and is considering having all paraeducators participate in a training.
 - A lot of modeling appropriate behavior management strategies, verbal and sign shaping, errorless teaching, and manding with staff who work with students.
 - District has invited autism initiative consultants to conduct a training for general education teachers.

Establishing and Maintaining Professional Relationships

- Utilize principles and procedures of Applied Behavior Analysis
- Focus on best available research
- Pairing to Establish Relationships
 - Pair yourself with other team members via positive reinforcement:
 - Verbal praise
 - Positive interactions
 - Professional discussions

Other Disciplines:

- Maintain respect
- •Understand the prospective they are taking
- •Knowledge of the science that supports other disciplines

Communicate with team members as you would expect them to communicate with you.

Maintaining Professional Relationships

Communication with other team members:

- •Utilize language that is understandable to all team members
 - Knowledge of your audience is key
 - Avoid use of language and technical terms that may not be fully understood by all team members
 - When training, the presentation and terms utilized may differ depending on the team member (i.e. occupational therapist versus a paraeducator)

Factors to Consider with Individual Team Members:

- •Buy in?
- Background experience
 - Setting
 - Work environment preferences
 - Structure of ABA
- Learning styles
 - Being observed
 - Feedback

- Relationships with team members
- Motivation
- Turn over rates

Maintaining Professional Relationships

Incentives/Reinforcement:

- •Hard and stressful work
- •Re-pairing
 - Team building activities
 - Games with prizes
 - End of the year gathering
- Conflicts easier to resolve with pairing

Incentives/Reinforcement:

- Data Collection
 - Graphs go up
 - Challenging behaviors decrease
 - = helps with buy in!!!

Maintaining Professional Relationships

- With any integrated team, conflicts are bound to occur.
- Deal with conflicts as soon as possible
 - Lessens resentment
 - Avoids memory issues
 - Brings focus back to students instead of adults
- Listen to others
 - Information available you missed or
 - Information you interpreted a different way
 - Ask other members of the team or consultants (if your classroom has them)

If differing views on programming, use of reinforcement, behavior plans, etc	then make data based decisions
If feedback becomes a debate	then video sessions or point out the behavior as soon as it happens.

Maintaining Professional Relationships

If team is dividing...

...then give mini-leadership roles

• Pair staff with students and sessions they are comfortable with

• Model/coach each other

• Fidelity check each other

• Builds internal capacity

- In general, know when to:
 - re-pair
 - build the team back up with fun activities
 - retrain
 - agree to disagree.



Conclusion

- Growth Nicole has seen from Collaboration:
 - Student progress: VB MAPP
 - Staff progress: fidelity check & site review
- Take-aways:
 - I. PUSH IN, PUSH IN, PUSH IN
 - 2. VB MAPP
 - 3. ADVOCATE
 - 4. COLLABORATE

Questions and Discussion

References

- Kaufman, N. Kaufman Speech to Language Protocol: Treatment Kit 1. Gaylord, MI: Northern Speech Services.
- Sundberg, M. L. (2008) Verbal behavior milestones assessment and placement program: The VB-MAPP. Concord, CA: AVB Press.

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