Integrated Team Approach to Teaching Students with Autism

Armstrong School District

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Introduction

- Armstrong School District

    Covers 436 square miles in rural western PA and includes 6 elementary schools and 2 secondary schools

The district Serves over 5,200 students and over 415 teachers

Website: www.asd.k12.pa.us

Applied Behavior Analysis for Children with Autism

- Significant body of research supports the effectiveness of ABA intervention for children with Autism (examples include; NAC Standards Report, 2009; Birnbrauer & Leach, 1993, Lovaas, 1987; McEachin, Smith, & Lovaas, 1993; Perry, Cohen, & DeCarlo, 1995).

Eclectic vs. ABA

A comparison of intensive behavior analytic and eclectic treatments for young children with autism

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Research – Staff Training

- A key variable affecting the performance of direct support staff is the quality of supervision/training provided to these individuals. (Green, Rollyson and Passante, 2002)
- Most effective and efficient training packages include, in some form, the provision of instructions, feedback, modeling and practice. (Sarakoff and Strumey, 2004; Iwata et al., 2000; Koegel et al., 1977; Lavie & Sturmey, 2002; Reid & Parsons, 1995)

Teacher Training

- Teacher training on the correct use of function-based behavior modification procedures using modeling, feedback, & manuals increased the correct use in procedures, and also produced a like gain in student responding, and reduction in problem behavior. (Koegel, Russo, & Rincover, 1977; Lalli, Browder, Mace, Brown, 1993).

Immediate Feedback

- Provision of feedback should occur as close to actual staff behavior as possible. Immediate feedback in the classroom has been shown to have a greater impact on staff behavior and be more effective than feedback occurring at a later time in a different setting. (Goodman, Brady, Duffy, Scott and Pollard, 2008; Gallant, Thyer and Bailey,1991; Scheeler, Congdon, Stansbery, 2010)

- Ideally, feedback should occur within 3 seconds of the behavior. (Scheeler, McKinnon and Stout, 2012)

VB- MAPP: Verbal Behavior Milestones Assessment and Placement Program

A Language and Social Skills Assessment Program for Children with Autism or Other Developmental Disabilities The students in the Autistic Support Classroom and participates in small group or one-on-one instruction throughout the rest of his school day. He participates in the PaTTAN State Initiative Program that uses Applied Behavior Analysis interventions to teach and assess skills in different developmental areas, including; mand (requesting), tact (labeling), listener response visual perceptual skills and matching to sample, independent play, social behavior and social play, motor imitation, echoic, spontaneous vocal behavior, listener responding (by Function, feature, and class), and classroom routines or group skills.

The VB-MAPP assessment is a criterion referenced assessment tool, which contains 170 measurable learning and language milestones that are sequenced and balanced across three developmental levels (0-18 months, 18-30 months, and 30-48 months) and is designed to provide a representative sample of a student's existing verbal and related skills. The test is administered in the fall and in the spring by direct assessment, informant interview, and informal and formal observations.
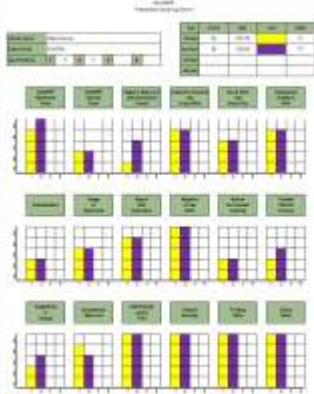
VB-MAPP Levels

VB-MAAP Language Barriers Scoring Form

VB_MAPP Milestones Assessment Form
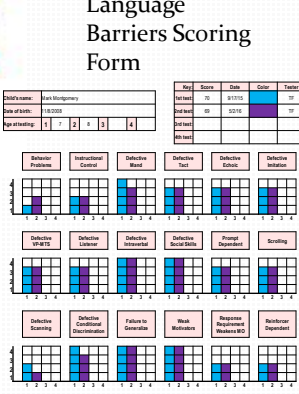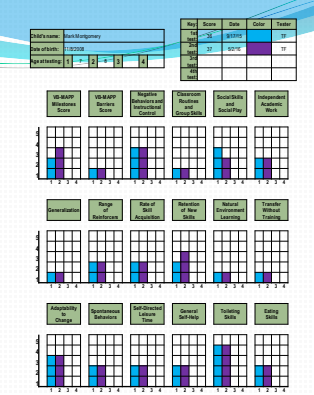
VB-MAPP Transition Scoring Form

VB-MAAP Language Barriers Scoring Form

VB_MAPP Milestones Assessment Form

VB-MAPP Transition Scoring Form

Teacher's Role and Responsibilities

While subbing multiple times in the classroom before I was hired and implemented the VB-MAPP Program the classroom had:

- No structure/ No direction on what do teach the students
- Used the TEACH Philosophy
- Pull out therapy that had long transitions
- Students were included way before they were ready
- There was a lot of problem behavior that included sending students to out of district placements.
- Very noisy/ looked like a zoo
- No true documentation of student progress

Teacher's Role and Responsibilities

- Attended the 3 day boot camp along with the paraprofessionals
- Began assessing students at the beginning of the school year and began developing their individual programming and card sorts.
- We took it slow starting strong with one student who displayed multiple problem behaviors and decreased verbal ability. This student used a communication device and we began teaching sign language along with the picture cards and objects. After a couple of months we saw an extreme amount of progress in this student who began to verbalize more.
- After assessments were completed, each student had their own individual card sort and programming developed.
- Developing and managing the classroom schedule
- Daily/ Weekly/Monthly meetings and trainings
- Running Fidelity Checklist to make sure all procedures are implementing correctly
- Collaborating with all team members and parents
- Willing to listen and take direction from the PaTTAN Consultants
- and follow ABA principles
- Being a leader at all times even when it is stressful

Programming

- Our students are currently receiving instruction in following programs:
  - Manding (items and actions, manding for information, peer to peer)
  - Tacting (objects, pictures, prepositions, adjectives, part/whole, actions)
  - Intraverbal (fill in the blanks, what/who/where questions, parts/features, item by feature/function/class, IV webbing)
  - Listener Responding (picture selection,1-2 component motor actions, pronouns)
  - Vocal Shaping
  - Motor Fluency
  - Motor Imitation
  - Direct instruction (Connecting Math Concepts, Reading Mastery)

Intensive Teaching Sessions

- We first started with the Intensive Teaching Sessions were each student is taught new targeted skills with an errorless teaching procedure using an 80% of easy skills to 20% of targeted skills.
- Individual card sorts of known skills and targeted verbal operants(manding, tacting, listener responding, motor imitation, intraverbal) based off of their VB-MAPP Assessments are set up in a certain order to provide fast paced teaching
- Always following the 80% easy to 20% hard rule.
- While completing intensive teaching sessions, a **variable ratio of positive reinforcement** is followed to keep the student engaged in learning and decrease problem behavior.
- We run 4-5 Intensive Teaching Sessions per day with each student's individual programming of targets

Manding (Requesting)

- Sessions can be conducted with students with a range of abilities from early to advanced learners.
- Mands are dependent on a student's motivation for the item.
- Need a variety of reinforcers available to account for momentary changes in motivation throughout the sessions and throughout the day.
- We run 4-5 mand sessions per day including individual sessions and peer to peer manding.

Direct Instruction

- Programs
  - Reading (SRA) Mastery
  - Connecting Math Concepts

- Students were involved in these programs when their VB-MAPP Assessments showed that they were ready

Inclusion

- Some of our students are included in general education settings. Eligibility is determined by performance as indicated by the Transition Criteria checklist which is on the next side. The checklist below is something that the teacher uses when collaborating with general education or learning support teachers.

Student Name:_____
Month: _____
Grade:_____
Classroom: _____
Subject: _____
Issues Discussed:

Mon	Tues	Wed	Thur	Fri
0 5 10	0 5 10	0 5 10	0 5 10	0 5 10
15	15	15	15	15
MTN	MTN	MTN	MTN	MTN
Beh	Beh	Beh	Beh	Beh
Acad	Acad	Acad	Acad	Acad
Specific	Specific	Specific	Specific	Specific

Transition Criteria Checklist

Transition Criteria to be considered for Inclusionary Practices

Student:_____ Date:_____

Transition Assessment		Student Scores
#2 = VB Overall Barriers Assessment Score	2	
#3 = Negative Behaviors and Instructional Control	5	
#4 = Classroom Routines and Group Skills	4	
#0 = Rate of Acquisition	4	
Choral Responding	Participates in DI in AS earning 90% mastery every ten lessons	
Strong Acquisition Rates	Review Weekly Probe Sheets	
Level 3 Manding	Achieves 11 and 12	

Additional Comments to assist with determination:
_____
_____
_____

Problem Behavior

- Single student example:
- Student exhibited problem behavior maintained by escape from educational demands. Problem behavior consisted of tantrum behavior: refusal statements, swiping objects/instructional materials, leaving assigned instructional area, kicking/pounding/hitting objects and people, falling to the ground.
- Protocol followed: Escape extinction

Escape Extinction
Procedural Integrity Checklist

Date:_____   Staff:_____

Observer1:_____ Observer2:_____

1. If problem behavior occurred when you presented a demand/instruction, did you keep demand on (escape extinction) until instructional control was obtained while maintaining safety of Student?	Y	N	N/A
2. Once Student complied with original demand without problem behavior, did you present at least 2 other easy tasks?	Y	N	N/A
3. If Student complied with tasks presented without presenting problem behavior, did you reinforce him?	Y	N	N/A
4. Did you make sure to reinforce less after running the escape extinction than when you reinforce during a cooperative run-through	Y	N	N/A
5. If during the presentation of easy tasks, Student reverted to problem behavior, did you repeat steps 1 through 4?	Y	N	N/A
6. Did you tally all occurrences of problem behavior	Y	N	N/A
7. After having used escape extinction, did you evaluate your teaching to determine the possible reason why problem behavior occurred and what you need to change for your next run through and/or session?	Y	N	N/A
Percent correct steps		_____/7	

Baseline Problem Behavior:

45 minute duration; 29 episodes per day, 2-3 x per week

After 2 weeks of running the escape extinction protocol:

0 occurrences
 --after the problem behavior was initially eliminated, the student's longest duration of future problem behavior was about 10 minutes in duration, 0-1x per week.

Problem Behavior

- Problem behavior does exist even in a highly structured classroom at times.
- However, when it occurs, it is typically brief and infrequent in comparison to previous years when problem behavior occurred frequently and for long durations.
- There are procedures to follow based on the function of the behavior (why the behaviors are occurring).
- In addition, we conducted weekly staff meetings to ensure that ALL staff understood the behaviors, the procedures, and that all was followed with fidelity.

Classroom Staffing & Training for Sustainability

- Para Educators
- Weekly team meetings/trainings
- Sign off sheets for accountability
- Treatment Fidelity Checklists
- Posted reminders at student work areas and wall cues for behavior intervention procedures.

Administrative Commitment/ Internal Coach Role

- Initial reduction in district assignment to allow for greater availability to AS classroom-approximately one day per week.
- Oversee classroom functioning-ability to bring new perspective and observe things that day to day may be overlooked.
- Provide regular feedback and be a liason between classroom and administration and/or parents..

Internal Coach

- Attended trainings with the team, guided team in VB-MAPP Assessment
- Helped with material and card sort initial set up
- As the program progressed, the role of the internal coach shifted….

Internal Coach

- Conducts fidelity checks on teaching and behavioral interventions.
- Conducts transcription of teaching to ensure procedural fidelity
- Conducts trainings on specific topics such as the importance of following the VR, behavioral intervention procedures, pairing instructors with reinforcement, reinforcer identification
- Helps with team building activities. Positive reinforcement for the staff is important too!

Intensive Teaching Treatment Fidelity Checklist

Transcription Example

- **Data/Observation**:
- T Tcheck Sr+
- LR (Tp Ttt) LR Sr+
- Tcheck Sr+
- T T (Tp Ttt- Tp Ttt Tp Ttt) LR T Tcheck Sr+
- (Tp- Ttt) LR (T- LR Tp Ttt) T Sr+
- Tcheck Sr+
- Tcheck Sr+
- (Tp Ttt Tp Ttt) T E IV (Tcheck- Tp Ttt) LR Sr+
- LR Tcheck Sr+
- T (Tp Ttt) LR IV LR Tcheck SR+
- (Tp Ttt) IV LR (Tcheck- Tp Ttt) LR E MI (Tcheck- T Tp Ttt) E Tcheck Sr+

-
- Total Trials 43
- Total Run throughs 11
- VR 4
- Easy/Hard 76/24

Occupational Therapist

- Prior to participation in PaTTAN Autism Initiative:
  - Sessions were strictly pull out
  - Long transitions
  - Problem behavior that included kicking, screaming, and refusals
  - Typically worked on writing and cutting
  - Slow and inconsistent progress

Occupational Therapist

- Attended Boot Camp
- Began "card sort" with staff
- Monitored motor imitation programming

Motor Fluency Program

- Big 6+6 (Fabrizio, Moors, and Pahl, 2001)
  - Reach
  - Squeeze
  - Shake
  - Point
  - Pinch
  - Turn

Motor Fluency

- Haughton Learning Center Handwriting: Print (Haughton, 1999)
  - Marks
  - Letters
  - Numbers

Occupation Therapist's Roles

- Currently:
  - Work with a push-in and integrated approach
  - Progress is clearly documented
  - No transitions/more time directly spent with students
  - Decreased problem behavior
  - Actively participate in site reviews and consultation
  - Role transformed to coordinating a motor fluency program

SLP

- Prior to receiving consultation, speech language support was strictly pull out.
- Typically worked on vocabulary development.
- Most students had difficulty expressing their wants and needs, so many students used PECS or a Speech Generating Device to make requests.
- Progress was slow
- There was no carry over of skills taught
- Numerous behavior issues such as kicking, hitting, screaming, spitting, throwing objects
- I was ill equipped and not trained to effectively service this population of students

SLP

- We knew that something had to change...what we were doing wasn't working.
- Mrs. Arbuckle, Mrs. Stone, and I went to boot camp and were determined to try something that might work with our students.
- We started administering VB MAPP assessments in preparation for consultation
- Once consultation began, we began "the card sort" and I began to push in to conduct intensive teaching and manding sessions.
- As time progressed, I realized that students were making progress and was eager to start working on articulation.

Vocal Shaping

- Uses the Kaufman Speech to Language Protocol

- A systematic approach to teach word formation while controlling the level of oral motor complexity (http://www.northernspeech.com/early-intervention-language-and-speech/kaufman-k-slp-treatment-kit-1-ndash-basic-level/)

- Uses successive approximations and word shells to shape vocal behavior

- In our room, the SLP conducts the evaluation, sets up individual programs, orders the cards in developmental sequence, and oversees the programming

- Teachers and one aide are trained to run the program on the days that the SLP is assigned to other duties. This is to ensure treatment integrity and to be sure that all staff teaching vocal shaping reinforces the correct sound production.

- Goal is to reach 80% accuracy 3 days in a row before moving to a new target.

- Student performance is recorded and graphed.

Vocal Shaping Example (adapted)

- Bubble
- Buh-boe
- Bub-oe
- Buh-oe
- Buh

Student Examples

- Michael: Year One
  - Started the program with 132 intelligible adult words
  - Ended year one with 223 mastered adult forms
  - Gain of 91 words!

  Aidan: Year One
  - Started the program with 94 known adult forms
  - Could produce 7 vowel sounds, 12 consonant sounds
  - Ended year one with 123 mastered adult forms
  - Gained 27 words
  ….after year 3 mastered all vowels, and 6 consonant errors remain

Why the integrated approach is working:

- The team approach is not without its challenges.
- We were fortunate that our administration provided time when we needed to meet, collaborate, and plan programs for students, which we needed frequently!
- We sometimes had to value each others' professionalism more than our own opinions...and sometimes we simply had to agree to disagree.
- Because of our dedication to the team and our students, when someone now walks into the classroom, that person doesn't know who is the SLP, OT, para, teacher. We are all working on the same goals.
- We have hosted many visits from other local districts, states, and even China within our first three years.
- We trained educators from China in the implementation of ABA procedures.
- We have shared documents with PaTTAN to further their programs and enhance consultation.
- In addition, parents now compliment our efforts at IEP meetings. They are seeing a difference in their child at home as well.

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