A Behavioral Approach to Language Assessment

- Assessment is based upon B.F. Skinner’s Analysis of Verbal Behavior
- This analysis can provide us with valuable assessment and intervention strategies
- It is critical to conduct an accurate assessment of a child’s current skills and needs.
- It can be quite complicated given the variety of language problems experienced by children on the autism spectrum.

Agenda

- VB-MAPP Overview
- Milestones Assessment
  - Level 1
  - Level 2
  - Level 3
- Barriers Assessment
- Transition Assessment
- Task Analysis and Skills Tracking
- Implementing Assessment
- Analysis of Assessment
The Purpose of a Language Assessment

- Determine operant level of a child’s verbal (and related) skills
- Compare to “neuro-typical” language development data
- Identify language acquisition & learning barriers
- Identify if and where to begin intervention
- Establish Treatment Plan goals
- Design an individualized intervention program
- Determine best teaching strategies
- Monitor if the intervention is effective

Verbal Operants Assessed on the VB-MAPP

- Mand
- Tact
- Listener
- Echolalic
- Imitation
- Copy a Text
- Intraverbal
- Textual
- Transcriptive

Verbal Operants

1. Skinner (1957) calls this collection of language skills “The Elementary Verbal Operants.”
2. The elementary verbal operants are separate repertoires and functionally independent at the time of acquisition, and each must be taught.
3. speaker and listener skills are separate repertoires and each must be taught.
4. More complex language, such as conversations and language related to social skills, is comprised of these basic elements.
Milestones Assessment contains 170 verbal behavior milestones across three developmental levels (0-18 mos., 18-30 mos., 30-48 mos.), and 16 different verbal operators and related skills.

Barriers Assessment examines 24 common learning and language barriers faced by children with autism and language delays.

Transition Assessment contains 18 measurable areas to provide an objective evaluation of a student’s skills and learning capabilities to identify the setting that may best support learning.

Task Analysis and Skills Tracking provides a further breakdown of the 16 different skill areas in the form of a checklist for skills tracking.

Curriculum Placement & IEP Goals directly linked to the assessments and provides specific direction for each of the 170 milestones and helps design a balanced intervention program.

The VB-MAPP spans a 30-year history of research and development by Mark Sundberg. In 1998, together with James Partington, Dr. Sundberg created The Assessment of Basic Language and Learning Skills (ABLLS) which:

- ‘Lacked developmental appropriate scope and sequence’
- ‘Never meant to be utilized as curriculum’
- ‘Provides no guidance for what order to target objectives’
Methods of Measurement

- For educational purposes, the goal is to as efficiently and effectively as possible set developmentally appropriate goals and objectives. Information on a specific student can be gathered in a variety of ways.
  - Includes:
    - Interviews with parents, teachers, or service provider
    - Observation of the student in natural setting
    - Specific assessment of the skill (especially true for barriers portion)

Measurement Methods Used to Assess Milestones

- **Formal Testing (T):** Specifically presenting the child with a task and recording the response
- **Observation (O):** Watching for the skill to occur in environmental settings without formal presentation
- **Either Formal Testing or Observation (E):** Assessor can determine which of above to use
- **Timed Observation (TO):** Target response must occur within a fixed amount of time

Milestones Assessment

- The Milestones Assessment is:
  - Developmentally appropriate in scope and sequence
  - Criterion referenced assessment
  - Broken into 3 developmental levels
    - Level 1: 0-18 months
    - Level 2: 18-30 months
    - Level 3: 30-48 months
  - The scores for each skill are balanced across each level
  - There are 5 items and 5 possible points for each skill area
Milestones Level 1
0-18 months


The task for the person performing the assessment is to identify a baseline for each skill.

1. If a test item is clearly a part of the child’s skillset, score that as a 1 and move on.
2. If the child is reaching a level of acquisition, but may not completely demonstrate a skill, more direct testing is warranted.

Level 1 Skill Areas

- Mand
- Tact
- Listener
- Visual Perceptual Match-to-Sample
- Play
- Social
- Imitation
- Echoic
- Vocal
Milestones Level 2

18-30 months

- Instructions for scoring begin on page 47 of the Guide book
- In Level 2 new skill sets are represented
- These areas were not present in Level 1 because most typically developing 18 month children have yet to acquire them
- It is hoped by presenting these in Level 2 it will be clearer what to focus on for a child scoring in each of the levels

Level 2 Skill Areas

- All skill areas from Level 1 except Vocal with the addition of:
  - Listener Responding by Feature, Function & Class (LRFCC)
  - Intraverbal (IV)
  - Classroom Skills
  - Group Skills
  - Linguistic Structure
Milestones Level 3
30-48 months

- The instructions for scoring begin on page 71 of the Guidebook.
- As in Level 2, in Level 3 there are new skill sets represented.
- These academic skills should be avoided as part of the curriculum with language delays that fall primarily in Level 1 or 2.

Level 3 Skill Areas

- All skill areas from Level 2 except Imitation & Echoics, with the addition of:
  - Reading
  - Writing
  - Math
Barriers Assessment

- Tool designed to identify and score 24 different learning and language acquisition barriers
- Once a specific barrier has been identified, a more detailed descriptive and/or functional analysis of that problem is required
- There are many ways that a verbal repertoire or related skill can become defective
- Individualized analysis are necessary to determine the nature of the problem, and what intervention program might be appropriate

Common Learning and Language Acquisition Barriers:

- Instructional control (Escape/avoidance)
- Behavior problems
- Defective mand, tact, intra-verbal, motor imitation, listener discrimination
- Defective echoic
- Prompt Dependent
- Scrolling Responses
- Weak or atypical motivation
Where did these Barriers Originate?

- Their Environment.
  - i.e., if a child cannot effectively mand:
    - Other behavior will begin to serve as the mand function
    - Extinction sets in and reinforcers narrow
    - The child starts to need adults less and less to get needs met!
- Dr. Sundberg argues that we helped create 23 out of 24 Barriers!

Transition Assessment

- Can provide a measurable way for a child’s IEP team to make decisions and set priorities in order to meet the child’s educational needs.
- Comprised of several summary measures from other parts of the VB-MAPP, as well as a variety of other skills that can affect transition including:
  - Overall score on the Milestones
  - Overall score on Barriers
  - Negative behaviors
  - Classroom routines and group skills
  - Social skills
  - Academic Independence
  - Generalization
  - Variation of reinforcers
  - Rate of skill acquisition
  - Retention
  - Natural environment learning
  - Transfer skills
  - Adaptability to change
  - Spontaneity
  - Independent play
  - General self-help
  - Toiletting skills
  - Eating skills
Task Analysis & Skills Tracking

- Provides a further breakdown of skills and serves as a more complete and ongoing learning and language skills curriculum guide.
- There are approximately 900 skills presented covering the 16 areas of the VB-MAPP.
- Once the Milestones have been assessed and the general skill level has been established, the task analysis can provide further information about a particular child.
- The skills identified on the task analysis contain a wide range of supporting components of the target area.
- These skills may not be significant enough to identify as Milestones or IEP goals, but each of them play an important role in moving a child’s repertoire closer to that of a typically developing child.

Task Analysis and Skills Tracking: LEVEL 1 (0-18 MONTHS)

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Target Level</th>
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Before You Begin

- USE YOUR GUIDEBOOK!!
- Turn to page 19 of the Guidebook, review table 2-1 to see tips for the tester
- Make sure you have materials to test each skill (should be gathered in the VB-MAPP tubs in the office)
- ALWAYS have a copy of the Guidebook with you during assessment
- DO NOT assume that if they can demonstrate half of the skill that would give them a score of 1, that you can give them a ½ point

Interpreting VB-MAPP Results

- Step 1
  - Identify general level of the child
    - Level 1, 2, or 3
  - Each level is designed to correspond with an approximate linguistic and developmental age
    - Certain skills, targets, & teaching styles may be more effective
Interpreting VB-MAPP Results

Step 2
- Look at the scores in each skill area and their relation to the student’s performance in other areas
  - Are there strengths in one area that could benefit the student?
  - Weaknesses that need to be addressed?
  - I.e., if a student has a strong receptive repertoire but weak echoic, you may want to look at PECS

Step 3
- Look for balance across all of the skill areas (mand, tact, listener, etc.)
- The Milestones Assessment is designed to be able to quickly read a profile by looking for a general balance of one repertoire in relation to another
- A student is out of balance if they have 100 listener skills but only a few mands: Focus would need to be on manding

Scores Within Level 1
- Focus should be on establishing:
  - Mands
  - Echoics
  - Motor Imitation
  - Listener Discriminations
  - Tacts
  - Visual Perceptual & Matching Skills
Level 1 Learners

- Play and social skills should be a major part of intervention
- Teaching style may be more “intensive”
  - Higher number of trials
  - Carefully arranged contingencies
    - Prompting
    - Prompt Fading
    - Shaping
    - Transfer of Stimulus Control
    - Use of Motivation
    - Differential Reinforcement

Sample IEP Goals-Level 1 Learner

- Johnny will _______ with 90% accuracy across 3 consecutive days.
  - Emits 10 different mands with/without desired item present
  - Spontaneously emits (without prompt: “what do you want”) average of 50 or more mands per day
  - Tact 50 items
  - Tact 10 actions
  - ID 50 items in messy array of at least 8
  - Perform 20 specific actions on command
  - Match 100 non-identical objects or pictures in an array of 10
  - Imitate 25 two-component actions
  - Echo 50 V/C combinations of 2 syllables or more or full words
  - Mand to peers 5 times per day

**See page 150 of VB-MAPP Guide**
Scores Within Level 2

- Still an early learner, but is beginning to show solid learning and language skills.
- Focus should be on systematically expanding existing skills in a variety of ways.

Level 2 Learners

General target areas forming core of intervention should be:

- Expand the scope and size of mand, tact, and listener repertoires (teach more nouns, verbs, adjectives).
- Develop two- and three-step motor imitation and instruction following.
- Beginning LRFFC.
- Beginning intraverbal skills.
- Develop social and verbal interactions with peers.
- Develop group and classroom skills.
- Learning in less restrictive settings.
Sample IEP Goals-Level 2

 Learner

“Johnny will _____ with 90% accuracy across 3 consecutive days.”

- Mand for 50 different missing item with only verbal prompt (“what do you need?”)
- Spontaneously mand for other people to perform 10 specific actions in natural environment (game, play)
- Tact and ID 250 items
- Tact and ID 25 actions
- ID 10 different colors or shapes in array of 5
- Match 200 non-identical objects or pictures in array of 10, containing 3 similar items
- Select correct item from messy array of 10 given 200 different fill-ins or WH questions for FFC
- Answer 200 fill-in and WH questions involving noun and verb (intraverbal)
- Respond to mands from peers 10 times per day

Scores Within Level 3

- A student who is reaching the milestones in Level 3 is demonstrating a solid foundation of skills that will allow for more advanced language, social, and academic instruction.
- Level 3 begins at the developmental equivalent of 30 months of age when children have acquired TONS of language.
- Hundreds of mands, tacts and listener responses
- Easily learning new words on a daily basis
- Mands are spontaneous, frequent, and controlled by child’s personal motivators—especially those that relate to verbal information (asking questions)
**Level 3 Learners**

General target areas forming core of intervention should be:

- Expand the content of what the child talks about by teaching new mands, tacts, and LD responses.
- Expand sentence size by teaching child to modify basic nouns and verbs with adjectives, prepositions, pronouns, adverbs...
- Develop more complex mands - such as mands for information & involving parts of speech.
- Teach intraverbal behavior (how to talk about things not present).
- Learn to use verbal skills in socially appropriate ways.
- Develop social and verbal interactions with peers.
- Increase frequency & complexity of peer social interaction.
- Movement to less restrictive educational setting.

**Sample IEP Goals-Level 3 Learner**

1. **Johnny will** _[goals to be filled in]_ with 90% accuracy across 3 consecutive days.

   - Spontaneously mand for information at least 90 times a day with at least 4 different question words (what, where, who, which, when, can, do...)
   - Tact specific aspects of at least 25 different items when given at least 4 randomly rotating verbal questions.
   - Complete or continue 25 patterns or sequences with at least 3 parts.
   - Select correct item from messy array of 15 for 200 different WH questions for FFC of at least 100 different items.
   - Answer 3 questions about a story after being read a short passage from a book for 50 different passages.
   - Answer 500 different intraverbal questions.
   - Take turns and share reinforcers with a peer an average of 10 times a day.
   - Spontaneously engage in at least 4 verbal exchanges with a peer an average of 10 times a day.
   - Sit in a 20 min group session involving 5 children without disruptive behavior and answer 10 intraverbal questions.

**Questions & Comments**