OBJECTIVES:

1. Participants will be able to identify Skinner’s verbal operants: mand, tact, echoic, intra-verbal, textual, textual, and transcription.

2. Participants will be able to gain knowledge on the five components of the VB-MAPP: Milestones Assessment/ EESA, Transitions Assessment, Task Analysis and Skills Tracking, Barriers Assessment and Placement, and IEP Goals.

3. Participants will be able to gain knowledge on how to implement the VB-MAPP.

4. Participants will be able to gain knowledge on program development using the VB-MAPP.

5. Participants will be able to gain knowledge on how to write functional and behavioral based IEP goals from the outcomes of the Milestones Assessment.

ABSTRACT:

The Verbal Behavior Milestones Assessment and Placement Program (VB-MAPP) is a criterion-referenced assessment and curriculum guide developed for children with autism or other developmental disabilities. It is based on B.F. Skinner’s (1957) Analysis of Verbal Behavior, typical developmental milestones, and behavior analysis research. The VB-MAPP consists of 170 measurable milestones balanced across 16 skill areas and three developmental levels. The VB-MAPP can be implemented in a home or school setting and identifies skills to be taught across the verbal operants, including the listener repertoires and social behavior repertoires. The results from the VB-MAPP assessment will suggest where to place a child in the verbal behavior curriculum as well as assist in developing appropriate IEP goals.
Nicole Carlisle, MS, BCBA

Nicole Carlisle, MS, BCBA currently provides in-home ABA consultative services for families in the community as well as training for parents, teachers and other professionals. She has over 12 years of experience providing services to children with autism and other developmental delays in both home-based and clinical settings. She has extensive training and experience in development of Verbal Behavior Analysis programming as well as functional analysis and management of problematic behaviors. Nicole received her Master’s degree in Applied Behavior Analysis from St. Cloud State University and completed an extensive practicum at the University of Kansas. Nicole has assisted in opening two clinic-based ABA programs and served as clinical director at a clinic-based program for children with autism and other developmental disabilities.

Kristina Ina, MEd

Kristina Ina, MEd received her undergraduate degree in Psychology with a concentration on children from John Carroll University in 2007 and a Master’s degree in Early Childhood Education from Cleveland State University in 2011. She has completed her coursework and supervision and will sit for the Board Certification in Behavior Analysis (BCBA) exam in May 2013. She has been providing Applied Behavior Analysis (ABA) for children with autism in home programs for five years.
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Assessment and Development of a Verbal Behavior Program Using the VB-MAPP
June 19, 2013
Milestones Autism Spectrum Disorder Conference
Nicole Carlisle, BCBA
Kristina Ina, MEd

VERBAL OPERANTS: BRIEF REVIEW
- Mand
  - a response that occurs in the presence of some establishing operation and is maintained by a specific reinforcer
- Tact
  - a response that occurs in the presence of a nonverbal stimulus that is maintained by conditioned generalized reinforcers
- Echoic
  - a response that occurs in the presence of an identical verbal stimulus that is maintained by conditioned generalized reinforcers

VERBAL OPERANTS: BRIEF REVIEW
- Intraverbal
  - a response that occurs in the presence of a non-identical verbal stimulus that is maintained by conditioned generalized reinforcers
- Textual
  - a response that occurs in the presence of a non-identical verbal (written) stimulus that is maintained by conditioned generalized reinforcers
- Transcription
  - a (written) response that occurs in the presence of a verbal (written) stimulus that is maintained by conditioned generalized reinforcers

VB-MAPP OVERVIEW
- Developed for children with autism or other developmental disabilities
- Based on B.F. Skinner’s analysis of verbal behavior, typical developmental milestones and behavior analysis research
- Suggested milestones were selected and sequenced from over 50 developmental charts
- Milestones mark a significant marker in development, rather than focusing on task analysis
  - Looking for level of linguistic competence equal to peers
- Probes a representative sample of child’s language repertoire

VB-MAPP OVERVIEW
- Sequenced and balanced across 3 developmental levels:
  - Level 1, 0-18 months
  - Level 2, 18-30 months
  - Level 3, 30-48 months
- Field tested:
  - 75 typically developing children
  - 200 children with autism
- Criterion-referenced assessment
- Curriculum guide
- Skills tracking system
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VB-MAPP OVERVIEW
- Assessment can be conducted with any language-delayed individual, regardless of age or diagnosis
- No standardized training required for evaluator
- No time limit
- Direct assessment, observation and parent/teacher report
- Can be conducted in classroom, home, community
- No specific sequential order of assessment
  - Work with child’s MO
- No standardized materials
- Assess child’s operant level/baseline level of skills

VB-MAPP COMPONENTS
- VB-MAPP Milestones Assessment
- VB-MAPP Barriers Assessment
- VB-MAPP Transition Assessment
- VB-MAPP Task Analysis and Skills Tracking
- VB-MAPP Placement and IEP Goals

VB-MAPP MILESTONES ASSESSMENT

ASSESSMENT FORMAT
- Capture child’s MO
- Multiple milestones can be assessed simultaneously
- Track problem behavior exhibited
- Present variety of mastered and new skills
- Plan to transition to different locations
- Present demands using a Mixed VB Format

ASSESSMENT FORMAT
- Reinforcement
  - Provide non-contingent reinforcement
  - Provide abundant reinforcement for correct, independent responses
- Task demands may be presented 2-3 times
- Observe parent and child interactions
- Track vocalizations/words/sentences
- Use least to most prompting procedures
- Plan peer interactions

VB-MAPP Milestones Assessment

METHODS OF MEASUREMENT
- Formal Testing (T)
- Observation (O)
- Either formal testing or observation (E)
- Timed observation (TO)

SCORING
- 0 = Milestone not exhibited by child or item not tested
- ½ = Milestone criteria specifically stated for each skill
- 1 = Milestone criteria specifically stated for each skill
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**LEVEL 1 MILESTONES**
0-18 MONTHS
- Mand
- Tact
- Listener Responding
- Visual Perceptual Skills and Matching-to-Sample (MTS)
- Independent Play
- Social Behavior and Social Play
- Motor Imitation
- Echoic
- Spontaneous Vocal Behavior

**LEVEL 2 MILESTONES**
18-30 MONTHS
- Mand
- Tact
- Listener Responding
- Visual Perceptual Skills and Matching-to-Sample (MTS)
- Independent Play
- Social Behavior and Social Play
- Motor Imitation
- Echoic
- Listener Responding by Function, Feature, and Class (LRFFC)
- Intraverbal
- Classroom Routines and Group Skills
- Linguistic Structure

**LEVEL 3 MILESTONES**
30-48 MONTHS
- Mand
- Tact
- Listener Responding
- Visual Perceptual Skills and Matching-to-Sample (MTS)
- Independent Play
- Social Behavior and Social Play
- Reading
- Writing
- LRFFC
- Intraverbal
- Classroom Routines and Group Skills
- Math
- Linguistic Structure

**VB-MAPP BARRIERS ASSESSMENT**
- 24 common learning and language acquisition barriers that could impede a child’s progress
- Determine specific barrier
- Focus is on what a child cannot do and why
- A functional analysis can be conducted after a specific barrier has been identified

**Barrier categories**
- Behavior problems
- Instructional control
- Defective mands
- Defective tacts
- Defective echoic
- Defective imitation
- Defective visual perception or MTS
- Defective listener skills
- Defective intraverbal
- Defective social skills
- Prompt dependency
- Scrolling
- Defective scanning
- Defective conditional discriminations
- Failure to generalize
- Weak motivators
- Response requirement weakens MO
- Reinforcer dependence
- Self-stimulation
- Defective articulation
- Obsessive-compulsive behavior
- Hyperactive behavior
- Failure to make eye contact
- Sensory defensiveness
**Barriers Assessment Example**
- Failure to make conditional discriminations (C0s)
  - 1. Makes conditional discriminations at a level that is in balance with his Milestone scores
  - 2. Has trouble when the C0 requires more effort or attending (large arrays, scenes, similar stimuli)
  - 3. Limited progress on tasks that involve verbal C0s (LD, LRFFC, IV), but good progress in other areas
  - 4. Fails at most tasks that involve C0s (except MTS), emits negative behavior, history of failed attempts
  - 5. Does not make C0s, but can do simple discriminations (single mands, echoics, tacts, imitations)

**VB-MAPP Transition Assessment**
- Designed to identify if a child is making progress and has acquired the prerequisite skills necessary for learning in a less restrictive educational environment
- Comprised of summary measures from parts of VB-MAPP Assessment and VB-MAPP Barriers and other skills that can affect transition to a less restrictive environment
- Designed to identify whether a child is making progress and has acquired new skills

**Early Echoic Skills Assessment (EESA)**
- Evaluates a child’s ability to repeat a speech model
- Samples a child’s echoic repertoire through speech, phonemes, syllable combinations (words and phrases), and intonation patterns.
- Targets are arranged in a developmental progression
- Anyone can administer the EESA
- Components tested include vowels, consonants, number of sounds or syllables, and prosodic features of intonation, duration, and loudness.

**VB-MAPP Task Analysis and Skills Tracking**
- Provides a task analysis of the milestone skills
- Serves as an ongoing learning and language skills curriculum guide
- Provides information for generalization, maintenance, and functional use of skills in variety of educational and social settings
- Task Analysis and Skills Tracking form allows for detailed skills tracking
- 170 milestones
- 900 tasks covering 16 areas of VB-MAPP
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VB-MAPP

TRANSITION ASSESSMENT
- 18 assessment areas across 3 general categories
  - VB-MAPP Scores and Academic Independence
    - Most significant areas to consider when planning a transition to a less-restrictive environment
  - Learning Patterns
    - Provides information on a child’s pattern of learning
  - Self-help, Spontaneity, and Self-direction
    - Provides information on how independent a child is on daily routines, adaptability to changes in routines and self-direction in everyday activities

DEVELOPING A VERBAL BEHAVIOR ANALYSIS PROGRAM
- Verbal Behavior Program Components
  - Functional Language
    - VB-MAPP
  - Appropriate Play Skills
    - Independent and Social
  - Social Skills
    - Peer interaction, cooperative play, pro-social behavior
  - Problem Behavior
    - Functional analysis, function-based treatment, differential Sr
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DEVELOPING A VB PROGRAM
- Additional program features
  - Play-based assessments
  - Rapid Intensive Teaching Trials (ITT) and Natural Environment Training (NET) transitions
  - Frequent peer interaction opportunities
  - PLAY. PLAY. PLAY!!!!
  - Mixed VB Teaching Format
  - Parent Training

MIXED VB TEACHING FORMAT
- Interspersed trial teaching
- Mixed mastered & acquisition skills
- Quick pace of instruction
- Systematic manipulation of instructional stimuli
  - Gradual increase of array size and complexity
  - Multiple exemplar training

MIXED VB FORMAT
INTENSIVE TEACHING TRIALS (ITT)
- Imitation: gross motor, fine motor, oral motor, object manipulation
- Listener discrimination (receptive language)
- Matching-to-sample pictures and objects
- Tact: pictures, objects, actions, etc.
- Intraverbal: songs, fill-ins, associations
- Transfer of control
  - echoic, mand, mand, tact, MTS, LD, tact, IV
- Play skills
- Pre-academic skills

MIXED VB FORMAT
NATURAL ENVIRONMENT TRAINING (NET)
- Potent establishing operations
- Exposure to new potentially reinforcing stimuli
- Physical activity (jumping, swinging, riding)
- Generalization of skills
- Play
  - Leisure skills
  - Independent play
  - Echoics

SOCIAL BEHAVIOR NET
- Peer-to-peer manding
- Peer imitation: motor and vocal
- Listener behavior (mands, intraverbals)
- Parallel, cooperative, and sociodramatic play

LEVEL 1 LEARNER

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LEVEL 2 LEARNER
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LEVEL 3 LEARNER
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VB-MAPP IEP Placement & IEP Goals
- Corresponds with 4 other VB-MAPP assessments
- Provides suggestions for IEP goals for each of the 170 milestones across Levels 1, 2, and 3, in the Milestones Assessment
- Sundberg suggest including 12 IEP goals
- Focus should be placed on communication, play skills, and social skills
- Examples of IEP goals from the Verbal Behavior Milestones Assessment and Placement Program (VB-MAP)

Examples of Level 1 IEP Goals
- Michael will independently emit an average of 10 or more different mands per day (objects can be present) on 4 out of 5 consecutive data collection days.
- Michael will independently demonstrate the use of toys or objects according to their function such as looking at and turning pages of a book, holding a telephone to the ear, cradling a doll, brushing hair with a brush, etc., at least 10 times a day on 4 out of 5 consecutive data collection days.
- Michael will independently mand to a peer 10 times per day on 4 out of 5 consecutive data collection days.
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**EXAMPLES OF LEVEL 2 IEP GOALS**
- Nathan will independently mand for other individuals to emit at least 3 different specific actions in a play setting, game, or the natural environment five times a day on 4 out of 5 consecutive data collection days.
- Nathan will independently assemble toys that have multiple parts for 10 different sets of materials on 4 out of 5 consecutive data collection days.
- Nathan will independently respond to the mands of peers 25 times in a single day on 4 out of 5 consecutive data collection days.

**EXAMPLES OF LEVEL 3 IEP GOALS**
- William will independently mand in the natural environment for information at least 50 times a day with at least 4 different question words (e.g., what, where, who, which, when, why, how, can, do, will, or is) on 4 out of 5 consecutive data collection days.
- William will independently engage in sustained play activities for 15 minutes without adult prompts or reinforcement on 4 out of 5 consecutive data collection days.
- William will independently intraverbally respond to questions from peers at least 20 times per day on 4 out of 5 consecutive data collection days.

**THANK YOU**