

Teaching Minspeak Systems

Gail M. Van Tatenhove, MS, CCC-SLP - May 15, 2009 - Auckland, New Zealand

Minspeak Today

- Features in new technology are always supporting re-thinking and re-defining of Minspeak
 - ECO = addition of Scenes
- Minspeak devices offer options of using
 - Classic Minspeak
 - Morphed icons in the Minspeak section
 - Single meaning pictures in activity rows
 - Single meaning pictures on pages
 - Spelling/Word Prediction
 - Scenes

Minspeak Today

- Minspeak still uses pictures
- Minspeak still systematically uses multiple meanings in pictures
- Minspeak still uses icon sequences to differentiate the multiple meanings
- Minspeak still organizes vocabulary in patterns to build motor automaticity

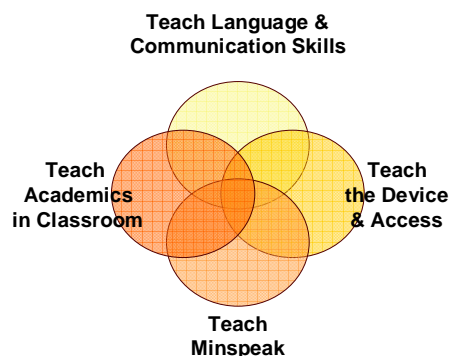
Minspeak Today

- Being used with individuals with a range of Complex Communication Needs (CCN)
 - Cerebral Palsy and Motor Speech Disorders
 - Unity series most popular
 - Developmental Disabilities
 - Unity series
 - MinTalk (DD Adults)
 - Custom programs
 - Autism Spectrum Disorders
 - LAMP Program with Unity
 - Adult Onset Disabilities
 - Word Core
 - AQLS

Minspeak Today

- The most EFFICIENT way to represent and organize vocabulary
 - rate of production (Hill & Romich) faster than SMP, spelling, or word prediction
- A powerful strategy for language development
- A effective strategy for classroom participation and independent living

Teaching Challenge



Gail's Goal for Teaching AAC, (including Minspeak Systems)

- *Active, Voluntary Participation in
- Learning Activities using
- *Generative Language with
- *Meaningful Motor Repetition that leads to
- *Motor Automaticity that opens up
- Language Connections that results in
- Independent Communication at home, school and in the community.

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Participation

- Participation Model (Beukelman and Miranda)
 - A model to help determine a student's level of participation, goals, expectations, assists needed, and barriers to overcome
- Practical Active, Voluntary Participation
 - Doing things that are person-driven
 - that the person enjoys
 - that the person decides he/she needs
 - That still meet learning goals (language, classroom, social, behavior, device operation)

Teaching Tip

- Use traditional strategies to teach early pragmatic interaction and emerging participation
 - Establish environments/set-ups that provide communication opportunities
 - Modify your behaviors to promote communication initiation
 - Create barriers
 - Feign stupidity
 - Provide logical consequences
 - Use the vocabulary that supports participation at this primary level (more, stop, all done, again, different, what, get, help, etc.)
 - support learning by LOCATION before MEANING

Teaching Tip

- Identify what the person enjoys talking about or doing and design lessons on those themes
 - Joshua = Frog & Toad book series, WordWorld videos and tv show
 - John = Bible
 - Melissa = Disney, music, tv
- Tap into "routine" participation and write scripts and mini-scripts
 - being rude, tattling, complaining etc. (like peers and siblings)
 - greet/part
 - simple chit-chat

Generative Language Requires

- Easy access to core vocabulary as your #1 Priority
 - Majority in 2 hits
 - Core vocabulary (non-context specific) of a minimum of 50 – 350 words from all or most word classes
 - Morphological variations (whenever possible)
- Secondary access to extended
 - Context specific
 - Available via SMPs or Spelling/WP

Generative Language

- Not all students have the necessary cognitive and language abilities to generate novel communication
- Set the goal to be
 - Some 1 word utterances that can later be combined with other words to encourage language learning (for young and lower functioning)
 - Simulated 2 part utterances (Kevin, Rachel)
 - Normal language production at the most appropriate age and cognitive level possible
- Use Normal Language Development milestones as your guide

Some Reasons to Talk

- | | |
|--|---|
| <ul style="list-style-type: none">• Greet/Part<ul style="list-style-type: none">– Hello, bye bye• Request object<ul style="list-style-type: none">– That, please, cup• Request action<ul style="list-style-type: none">– Want, get, do, up• Request assistance<ul style="list-style-type: none">– Help, do• Request recurrence<ul style="list-style-type: none">– More, again, another• Request information<ul style="list-style-type: none">– What, why, where• Existence<ul style="list-style-type: none">– This, that, look, see, there, here• Self/Possession / Person<ul style="list-style-type: none">– Mine, you, it | <ul style="list-style-type: none">• Nonexistence<ul style="list-style-type: none">– Uh oh, away, all gone, what• Disappearance<ul style="list-style-type: none">– Away, all gone• Rejection<ul style="list-style-type: none">– No, stop, don't, uh uh• Cessation<ul style="list-style-type: none">– Stop, all done, finished• Comment/Describe<ul style="list-style-type: none">– Like, bad, good, naughty, big, little, yuk, yum, hurt• Direct action/events<ul style="list-style-type: none">– Go, help, stop, come, eat, read• Name<ul style="list-style-type: none">– Car, shoe, cup• Associative<ul style="list-style-type: none">– Big, hot, pretty, up, off |
|--|---|

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Teaching Tip

- Teach words that represent early emerging concepts and a range of language functions
- Work toward a “starter core” of 50 words at a minimum
- Go to www.vantatenhove for a list of top vocabulary to teach

Teaching Tip

- Teach “traditional” language areas to support generative language development
 - vocabulary development
 - syntax and morphology
 - conversation and discourse
- Modify materials to accommodate the Minspeak program
- Create materials & strategies to help teachers use the core vocabulary in their classroom (descriptive teaching model)
- Keep eye on the prize = Independent Communication (narrative, chit chat, natural talking)

Motor Plans & Automaticity

- The simplest to the most complex neuro-motor activities of daily life are made possible by motor plans
- Motor plans are neuronal pathways in the central and peripheral nervous systems that facilitate ease and accuracy in the execution of any movement
- Motor plans are ...
 - not conscious once “learned”
 - automatic or semi-automatic

Why Are Motor Plans Important to AAC Learning and Use?

- People with CP, TBI, and a wide variety of neuro-degenerative conditions depend on motor planning to perform simple movements **to an even greater degree than their non-disabled peers**
- Motor plans and sensory feedback are linked to language learning

Motor Plans Form Through

- Repetition that is ...
 - Meaningful (K. Kangas, 2009 ATIA conference)
 - Frequent
 - Intense
- Consistency
 - 1 pattern = 1 result

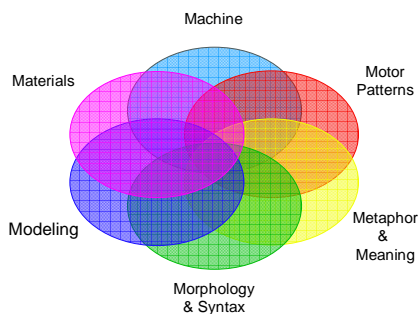
Teaching Minspeak Tip

- Don't practice too many “new” words per session
- Assist the person to make accurate motor movements/plans to reach automaticity
 - physically assist (hand-over-hand, to switch)
 - visually assist (pointing out locations)
 - verbally assist (name the icons to select)
- Practice patterns meaningfully
 - in repeated lines of books
 - in games
 - in songs
 - in conversation

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Supporting Minspeak Learning



Machine Learning

- Operational features
 - work with OT when access is an issue
- Customize overlay and vocabulary to make talking more efficient
 - use auditory prompts to help scanners (in therapy)
 - re-arrange icons (if necessary) for access help
 - simplify or shorten icon sequences for personal core
 - add important vocabulary not in MAP (gleaned from LAM, family input, etc.)
 - create macros for common tasks (e.g., Name/Date for writing in class)
- Simulate the organization with hands-on activities

Motor Patterns

- Motor plans
- Motor patterns are everywhere in Minspeak systems
 - in organizational patterns of vocabulary
 - in morphological variations
 - in navigational commands
 - in tools


Teaching Tip

- Create visual materials to show the patterns
- Practice practice practice
 - How do you make it fun when you are “drilling” on the pattern? (e.g. pronouns)
 - song, label objects with name tags, etc.
- Teach patterns with the “longest” output before the component words (e.g., pronoun phrases before individual pronouns)
- Customize “patterns” based on your “alternative judgment” to maintain very CLEAN patterns
 - Picture + POS
 - POS + Picture

Metaphor and Meaning

- Tied to vocabulary comprehension, world knowledge, life experience
- Normal Development
 - How do children learn the meanings of words?
 - How do those words fit into semantic networks?
 - How does this relate to learning Minspeak icons and icon associations?

Mapping a word and its referent

- A word is an arbitrary sign that signifies a referent.
 - Such as “cat” 
- The sounds /kæt/ signifies this
- Children have to come to understand that the sounds /kæt/ symbolize these four legged furry creatures.
- Therefore, “cat” is arbitrary and symbolic

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How do children map words and referents?

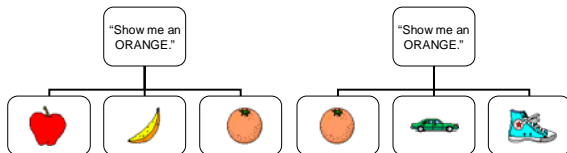
- Researchers believe that children use the following principles as working hypotheses about what a new word may mean:
 - Words refer to objects
 - Words refer to *whole* objects
 - Objects can have one and only one name
 - Therefore, new words refer to objects previously unnamed
 - New words extend to other members of the same category

Vocabulary: One way to study semantic development

- Vocabulary refers to the words that children can understand or produce
 - Receptive vocabulary: words that children can understand
 - Expressive vocabulary: words that children can pronounce
- Children can understand more words than they can produce

Study vocabulary


- Use “show me” technique to study receptive vocabulary



Vocabulary growth

- Children differ greatly in their rates of vocabulary acquisition
 - Age 1 year and 3 months
 - fastest child understands 200 words
 - slowest child understands only 20
 - Age 1 year and 6 months
 - best produces 70 words
 - poorest produces only 10

Characteristics of the early phase of semantic development

- **Fast-mapping**
 - A process by which a child can connect a new word with an underlying concept after only a brief encounter 
 - So, they understand that the four legged furry thing is a *rabbit* (and not a cat) after only one exposure to mom pointing and saying *rabbit*
- Children's early words are often of three types:
 - Objects, actions and states
 - Nearly 60% of English speaking children's first 50 words are non-context specific words, NOT nouns (context-specific)

Characteristics of the early phase of semantic development

- When children first learn a new word they do not use them just as adults do:
 - **Over-extensions**
 - Child applies the word to a wider collection of objects and events based on
 - Perceptual similarity (shape)
 - Functional similarity
 - Contiguity in time or space



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Characteristics of the early phase of semantic development

- When children first learn new words they do not use them just as adults do:
 - **Under-extensions**
 - When children apply the use of a new word too narrowly
 - Child uses the word *cat* only to refer to their particular *cat*

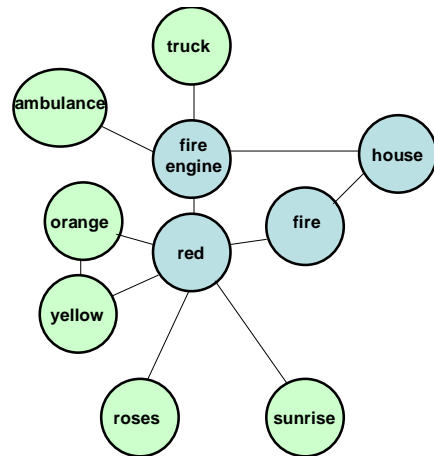


Characteristics of the Early Phase of Semantic Development

- When children first learn new words they do not use them just as adults do:
 - Use Invented words
 - Rarely derive words by adding suffixes (e.g., -er)
 - Follow regular rules
 - Simple, and semantically transparent e.g., *plant-man* for *gardener*

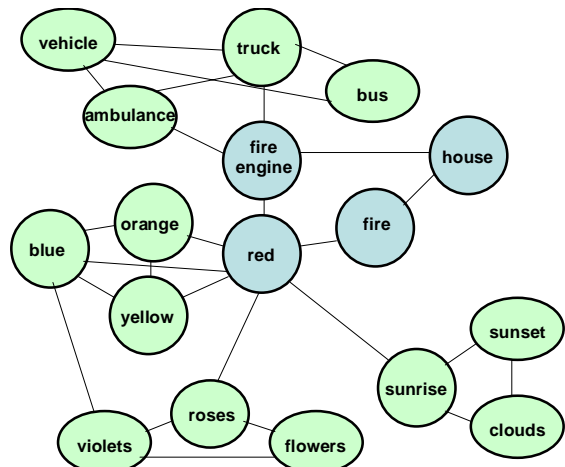
Developing Semantic Networks

- Semantic Network Models
 - Concepts represented as nodes
 - These nodes are linked to other concepts
 - Access from one node to another is caused by spreading activation
 - Automaticity and the strength of interlinkage with other nodes determines the rate of spreading activation



Developing semantic networks

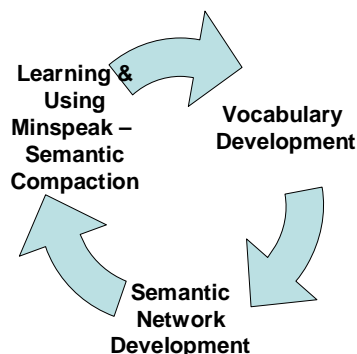
- Semantic Network Models
 - What develops?
 - Number of nodes
 - Number of links and their strength to other concepts
 - Automaticity



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Chicken or Egg?



Vocabulary Teaching in AAC

- Start by teaching the word in context
 - Real-life activity
- Provide props to do hands-on application of the metaphor used to represent the word
 - Key for the early emerging words that are NOT picture producers
- Do de-contextualization activities to expand the student's understanding of the concept

Understanding the Metaphors

- For pre or non-literate individuals, vocabulary is represented with pictures and these pictures have to be taught
 - Concepts with Visual Conventions
 - Metaphors

Teaching Multiple Associations

- Teaching Minspeak icons is NOT that different from teaching ANY AAC symbol
- Pre-Minspeak "Minspeak"
 - Use Pixon pictures
 - SMP with a "root" from a Unity® code
 - Create multiple meaning manual boards
- Collect a prop for each icon on the main overlay
- Provide hands-on activities with the real objects
 - do something with it, feel it, pretend with it, etc.

Associations & Architecture

- Hard to separate learning multiple associations without also teaching the architecture and working on motor patterns
- Draw out "word webs"
 - building semantic word relationships
- Teach "units" around an icon

Icon Word Webs

- By Icon for "small families"
- By Icon/then POS for "large" webs and to expand
 - Verbs
 - Adjectives/ "ly" Adverbs
- Develop branches with rules for adding new words
- Use to document core vocabulary additions

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Minspeak Architecture

- 4 basic architectural strategies
 - Semantic organization = Nouns
 - Grammatical organization = Most POS
 - Situational/environmental organization = Activity Rows/Pages
 - Visual scenes = Pages
- Closely tied to categorization and metalinguistic skills
 - the lower the language, the more it is taught by motor patterns

Teaching the Architecture

- Use a [Visi-Voca](#) (paper version of the voice output communication aid)
- Allow AAC user to “add” new vocabulary themselves
 - Maintain consistency in the “rules” of the organization
- Develop additional visual aids
 - Word webs to teach “relationships” between words and codes
 - [Charts](#) to learn “full group”

Teaching Tip – For Families

- Provide life experiences around the icons on the overlay
 - bring language and icon associations into everyday experiences
- Develop icon family “stories” around the words associated with an icon
- OK to PLAY
 - discovery learning

Minspeak & Grammar

- Minspeak programs are very GRAMMAR based for organizing vocabulary
- Challenge – to teach it in fun and meaningful ways with individuals with little to no metalinguistic knowledge
- Advantages -
 - Handles full morphology with patterns!
 - Patterns support use and learning of helper verbs and irregular past tense verbs
 - am-is-are was-were do-does-did have-has-had
 - go-went get-got make-made
 - eat- ate drink-drank sit-sat

Teaching Syntax and Morphology

- MODEL MODEL MODEL
- Use metaphors to [humanize word groups](#)
- Use [jingles and music](#) for grammatical classes - as memory aide and for fun!
- [Color code](#) Parts of Speech on AAC Systems
 - Write out words & sentences in color code
 - Create color coded sentence strips/stick/strings
 - Use a “metaphor” the student understands (“rainbow” of words = sentence)

Humanized Groups

BCI, 1975; GVT, 1980

- **Verbs (green)** = Herb Verb or Mr. Action Man
- **Nouns (orange)** = Mother Hubbard
- **Adjectives (dark blue)** = Art Tist
- **Adverbs (light blue)** = Ed Verb (Herb’s brother)
- **Interjections (pink)** = Interjection Joe
- **Determiners (orange)** = The Determinator
- **Conjunctions (white)** = Connie Junction
- **Prepositions (purple)** = Bob the Builder
- **Questions (bright pink)** = The Riddler
- **Negation (red)** = The Knotty Guy

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Teaching Syntax and Morphology

- Build language bridges to the technology using SIMPLE materials
 - for access problems to keep priority on LANGUAGE, not access
 - MCB with Partner Assisted Scanning as a pre-Device system ([Jenn](#))
 - Visi-Voca with Partner Assisted Scanning ([JJ](#))
 - Pixon Board ([Joshua](#)) – when tired, as back-up, not in optimum position, when with poor communication partner
 - for [language learning](#) issues
 - manipulate symbols and sequences
 - to learn organization

Language “Bridge” 1

- Language Building Boards - Materials that allow students to manipulate the symbols on the device and the semantic or navigational sequences used to retrieve words
 - Flashcards (like Fokes Sentence Builder)
 - Small mat or Wall chart of interchangeable pictures

Language “Bridge” 3

- Descriptive Environmental Engineering
 - Labels that say “what do” instead of “what is”
 - Used for modeling and interactive use with a range of communication partners
 - Used for communication by ambulatory users
 - Supports de-contextualization and practical use of core vocabulary

Jonathan

- Terrible Access
- Uses [Visi-Voca](#) that simulates vocabulary in Vanguard
 - Custom program
- Learning vocabulary without issues of access while waiting for technology to catch up to him!
 - ECO with Speech Recognition Software running in background

Language “Bridge” 2

- Activity or story boards – have a limited number of vocabulary, but placed on the board in keeping with the architecture of the device

Teaching Syntax and Morphology

- Use standard SLP procedures and materials with [modifications](#)
 - Large enough spaces to accommodate icon sequences
 - Core vocabulary is emphasized
 - Appealing to kids
 - Cost efficient for what you get
 - Useful with a variety of SLP kids/adults
- Create [Parts of Speech “Kits”](#) specific for your Minspeak program

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Correcting Grammar Errors

- Self-evaluate & correct language from LAM samples
 - Is it a complete sentence?
 - Are the words in the right order?
 - so people aren't confused
 - Are the right words being used?
 - Are there any missing or extra words?
 - check for verbs and then "little" words
 - Are you using the right word endings?
 - check those verbs first

Three Critical Communication Partner Behaviors

- **Model Language** through Aided Language Stimulation
 - Helps the partner know **WHAT** the person can say with the AAC system and **HOW** to say it
- **Prompt Awareness**
 - Helps the partner be aware of the level of prompts being used
- **Response Strategies**
 - Helps the partner provide the kind of language the student needs to improve output

Learn to Talk with AAC

A Review of Aided Language Stimulation

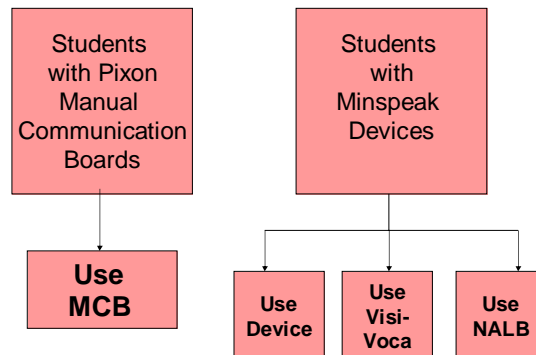
Been Around a While

- Called by different names
 - Partner-Augmented Input (PAI)
 - Natural Aided Language (NAL)
 - Aided Language Input (ALI)
 - Aided Language Stimulation (ALgS)
- Promoted by different people
 - Goossens', Crain, & Elder (1992)
 - Ronski & Sevcik (1996)
 - Cafiero (1998)

Contemporary Research

- Augmentative Communication News (Summaries)
 - Sept 2006 (Vol 18. Number 3) – 16 pages of info on ALgS
 - Go to www.augcominc.com
 - Single copy issue = \$20
- Shakila Dada (2004 – U of Pretoria, South Africa)
 - It is useful to teaching receptive vocabulary
- Cathy Binger (2004 – Penn State)
 - It is useful for teaching basic syntax (2 and 3 part utterances)
- Shelley Lund (2003 – Penn State, U of WI-Milw.)
 - It is useful for teaching morphology (after 320 models)

Doing ALgS



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Principles of ALgS

- Model maximum language possible and necessary without overwhelming the student
 - 1 or 2 words beyond current language output level
 - Based on target vocabulary, language level, or target concepts in the lesson
- Model at a rate SLOW enough for student to observe vocabulary selections, word combinations, and codes or navigational sequences
- Pair with speech as needed
- Utilize in parallel with Prompt and Response strategies

Prompt Strategies

- Expectant Delay (a comprehensive strategy)
 - Watch & Wait for 10 – 15 seconds
- Open-Ended Prompts (with expectant delay)
 - “Tell me about him (the lead dog) (Watch & Wait)
 - “Why does he need to be experienced?” (Watch & Wait)
- Coached Prompts (with expectant delay)
 - “Idea” Prompt = “Tell me either where he is or what he does? (Watch & Wait)
 - “Word Option” Prompts = “Let’s look at some words you can say with your board and see if you can tell me about the lead dog using one of them. Let’s start with Action Words.”

Response Strategies

- Expand
 - The student says “know” and you model “knows where (to) go”
- Connect
 - The student says “know, “ you model “because” hoping the student will add “go before”
- Correct (order, ending, word choice)
 - The student says “where know go” and you model “know where go”

Outcomes with Device-Based ALgS

- How many models of a word, using the person’s own device, have I provided before I started seeing the person use that word later on by him/herself?
 - Van Tatenhove (2006) – Using Language Activity Monitor (LAM) data
 - Range of 50 to 100 models (2 included students)
 - Range of 100 to 125 model (3 MR/DD adults)
 - Casey (2008) – LAM data
 - Range of 100 – 120 models (1 MR/DD adult)

Outcomes with Visi-Voca Based ALgS

- How many models of a word, using the client’s Visi-Voca, have I provided before I started seeing the person use that word later on by him/herself?
 - Van Tatenhove (2007) Logs and LAM Reviews
 - Client (27 year old literate male, CP with Pathfinder with U128 with U128 Visi-Voca)
 - Answer = Range of 75 to 150 models
 - Client (30 year old woman, Down Syndrome and CP with Pathfinder)
 - Answer = Range of 100 - 200 models

Helping Teachers

- Train them on the difference between Referential (context-specific) and Descriptive (non-context specific) teaching-talking-testing
- Help them learn how to model core vocabulary in their lessons
- Help them modify materials to emphasize core vocabulary

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Teacher Training

- Teachers are taught how to....
 - Teach in consideration of state curriculum and testing standards
 - Implement curriculum materials using various teaching strategies
 - Focus on critical concepts & vocabulary as identified in the curriculum materials

Teacher Training (cont.)

- Taught to get fluid, up-to-date information about what their students are learning (review) or have learned (test)
 - Use self-made or curriculum-based review and test materials
 - One word, response-oriented questions are asked - content words are the answers to these questions
 - Academic = Where is the Iditarod held?
 - Critical thinking questions are asked to probe deeper into the student's learning – require more than a one word response
 - Academic = Why would a musher want to use an experienced lead dog?

Teacher Style and Students

- **Referential Style**
 - Speaking children use lesson-specific words (context specific)
 - Many of the words of the lesson are new to them
 - Quick, one-word responses are the norm with usually 1 correct answer
 - Easy to design and grade tests
 - Allows for use of pre-made, fill-in-the-blank worksheets
 - Requires the least amount of critical thinking or language production by the student
- **Descriptive Style**
 - The words used by speaking kids are usually already in their language banks (non-context specific)
 - Encourages oral Q&A sessions to refresh student memory and provide additional teaching of the original information
 - Answers are multi-word descriptions or explanations
 - Could have more than 1 answer
 - "Essay" style questions
 - Requires more time and language production to evaluate student learning and progress
 - Requires more integration of the information

Baker, 2005

The Referential Style with AAC Users

- Designed to elicit short, simple answers instead of multi-word answers
- Feels "efficient" and "easy"
- Forces pre-literate AAC users to have context specific, specialized vocabularies which change frequently on a daily, weekly, or monthly basis
- Places the emphasis on fringe vocabulary rarely used outside of the lesson, instead of core vocabulary used for a life time

The Descriptive Style with AAC Users

- Designed to elicit multi-word answers
- Takes more time and feels more challenging
- Allows students who are learning to use AAC to use a stable vocabulary and get more practice putting words together
- Helps students use common, non-context specific words in different situations to build competence in using language
- MORE LANGUAGE = MORE LITERACY

Step 1: Current Teaching Routine

- Observe the classroom for at least 1 day
- Log % of referential vs. descriptive styles used in oral activities
 - with normally developing students
 - with student using AAC
- Note communication partner skills
 - timing (expectant delay, pace, etc.)
 - prompting strategies
 - response strategies
- Note roles of teacher, therapists, assistant, peers

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Step 1: Current Teaching Routine (cont.)

- Review written materials
 - types (paper, computer)
 - modification strategies used/needed
 - to access the materials
 - to be more “linguistic” in demonstrating knowledge
- Understand school policies and current practices to support inclusion
 - Participation Model (Miranda and Beukelman)
 - SETT (Zabala)

Step 2: Role Play the Lesson

- Have the teacher select a lesson on which he/she is currently working
- Ask the teacher to “teach me the lesson” using the strategies normally used with the class (e.g., textbook, other materials, lecture, video)
 - note key words and concepts orally presented
 - audio record if possible
- Encourage the teacher to do spontaneous “review” during the lesson, like she would with her class

Step 3: Review the Lesson Together

- Show how the words for the descriptive concepts that the teacher presented orally ARE in the device (sort of)
 - Listen to the audio recording
 - Circle her descriptive explanations/definitions on the [NALB](#)
 - LESSON – FLORIDA
 - big part land = region
 - water almost all around, water on three sides = peninsula
- Discuss [other strategies](#) to use when a word is NOT in the device.
- [Review the questions](#) she is going to ask the students to recall/review, interpret and apply the information
 - Discuss how to evaluate student learning

Words NOT in Device

- Word Altering strategies
 - same as opposite of
 - part of join words
 - starts with sounds like
 - add to end add to front
 - same group/family part of speech
- Temporary solutions
 - On quick & dirty topical manual boards
 - On sticky notes
 - On NALB written in erase-able marker in “short term parking” section of the board

Review Questions

- Which questions do you ask the student using AAC? What words on the NALB could answer that question?
- How can a question be re-worded for the student so he/she can answer it with words on the NALB?
- How can other strategies be used to review the information?
- What would the aide do to check student learning?

Step 4: Train on the NALB

- Don’t assume the chart is self-explanatory
- Call it something that is familiar to the teacher (e.g., “Word Wall,” “At-A-Glance” Vocabulary Chart)
- Explain how the chart provides the “code” to the words in the machine
 - Minspeak icon sequence
 - Page-based navigational sequence

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Step 4: Train on the NALB (cont.)

- Show how the words are organized
 - Part of Speech (with color coding)
 - Alphabetical order (except for people words)
 - Interrogatives in the “word group” that answers the question
 - Blank spaces to add more words
 - “Short term” parking at the bottom for temporary words
- Practice finding words
 - Give MAGIC RUB to erase permanent marker

Coping with Teacher Freak-Out

- “These ‘definitions’ (descriptive explanations) are too long for my student to say. He/she only talks with one or two words. Even if he/she could do this, it would take forever to get an answer.”
 - How much does the student need to say to show you he/she has grasped the concept?
 - Peninsula = a part of land with water almost all around it
 - acceptable answers: water around, almost all around
 - How can you balance this approach with the current ways you are reviewing and testing knowledge?

Are teachers really doing this?

- Teachers and class levels
 - Regular education more frequently than special education teachers
 - Preschool and elementary more than middle or high school teachers
- Initially doing planning forms for selected activities and lessons
 - 1 to 10 plans with support of SLP
 - Begin to implement DTM without pre-planning after 3 to 4 months of consistent use
- Visual support materials
 - Using mostly NALB
 - Little time for anyone to modify more materials

Step 5: Organize Lessons

- Provide a structure for helping the teacher “organize” a lesson with the new approach
 - Coordinates with current “lesson plan” strategies
 - Helps the teacher think in terms of Descriptive Teaching-Talking-Testing instead of Referential Teaching-Talking-Testing
- Offer the use of a pre-developed Lesson Planning form, if needed
- Show the teacher “lessons” organized by other teachers

Possible Challenges

- Multiple kinds of AAC devices and/or programs used in a classroom with multiple kinds of picture representations
 - Use 1 main critical vocabulary board for teacher to teach and test with the available vocabulary (no pictures) and personal boards by the students’ desks (with pictures)
- Teachers moving around the room
 - Make NALB as a free-standing or portable board
 - Make several NALBs to post around the room
- Lots of “independent” or small group working time
 - Create “stations” with NALB posted
 - Use peer helpers

Teacher Reported Subjective Outcomes of Descriptive Model

- Teacher Outcomes
 - Slows down speech rate & shortens sentence length
 - Emphasizes gaps in critical vocabulary when rehearse and do lesson
 - Builds natural support networks
 - Helps other students in the class with learning challenges
- AAC Student Outcomes
 - More active learners
 - Testing results are higher and more reliable
 - Improvements in reading/writing skills
 - Increases in multiple word production in AAC device

Teaching Minspeak Systems

Gail M. Van Tatenhove, MS, CCC-SLP - May 15, 2009 - Auckland, New Zealand

Objective Data of DTM

- Language Activity Monitor samples taken over the school year on 3 students with high tech devices
 - Student 1: Vantage with Unity45, 1st grade
 - Student 2: Vanguard with Unity84, 2nd grade
 - Student 3: Pathfinder with Unity128, 5th grade
- Each student tracked on 100 key vocabulary words and length of utterances used in spontaneous, self-generated communication collected from a sample of 2 weeks use of the device
 - No specific therapy done on these 100 words

Vocabulary Use & Sentence Length

- Student 1: U45 Sequenced in VT
 - Using 12/100 key words in August 2007
 - Using 74/100 key words in April 2008
 - MLU-M increased from 2.30 to 4.37
- Student 2: U84 Sequenced in VG
 - Using 33/100 key words in August 2007
 - Using 81/100 key words in April 2008
 - MLU-M increased from 3.71 to 6.29
- Student 3: U128 Sequenced in PF
 - Using 42/100 key words in August 2007
 - Using 99/100 key words in April 2008
 - MLU-M increased from 3.82 to 7.25

Making Support Materials

- Get the necessary tools (pictures, software)
- Find ways to make materials “on the fly”
- Create templates and time saving strategies
- Learn how to import graphics into standard software
- Recruit others to help make materials
- Re-cycle and revise commercially available products
- Make materials useful to ALL students
- Share what you make with others

Icon Sticker Sheet
Making Minspeak Materials



Making Materials

- For the classroom
 - Adapt classroom materials
 - Engineer the classroom
 - referentially (“what is”)
 - descriptively (“what do”)
 - practically (daily activities)
- For therapy
- For home – to help parents model and use the device

Adapting Student Materials

- Revise paper/worksheet materials, as necessary
 - Types of worksheets will vary
 - Try to adapt some materials to promote language, instead of just T/F, multiple choice, matching, etc.
- Use AAC software to help author materials quickly
 - PASS

Ideas for Literacy Activities

- Create a library of “aided” books
 - Highlight key sentences, words, or phrases in books, co-reading with the student
 - Write your own customized books with key vocabulary to learn
- Modify writing assignments with icons
- Encourage journaling
- Use recreational literature
 - Read and repeat song lyrics
 - Re-write articles from popular teen magazines
 - Add comments to articles in teen magazines or catalogs
 - Use poetry with repeated lines or filler slots
 - Develop scrapbooks or portfolios with captions

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Musical Lyrics

- Can be heavy in core vocabulary (chorus)
 - Love, love me do
 - You know I love you
 - I'll always be true
 - So please, love me do
- Often have repeated lines
 - "It's gonna be me"
- Is interesting to teens
 - Popular groups
 - Oldies
- Listen to or sing the song for fun, read/write the lyrics, then speak the lines word-by-word

Visual Support Materials

- Start with a NALB for use at home, therapy, and classroom
- Make additional visual support materials to supplement the NALB to use in specific educational, home, and therapy situations

CONCLUSION

- Implementing a Minspeak system might initially seem daunting.....
 - but the OUTCOMES of giving someone an AAC system that gives real language are worth the efforts
 - John (posted on YouTube)

Thank you!

Gail

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