

AAC with Students in Regular Education Classes

- Assets
 - Most students included in mainstream have personal AAC systems
 - Most students have personal classroom assistants, as needed
 - ☹️ Some which are “velcroed” to the student
- Challenges
 - ACOLUG Entries

Technology's Impact on Regular Education Practice

- Differences emphasized over similarities
- Time constraints
 - Priorities on “quick & easy”
 - Therapy = programming vs. language
- Poor language and academic performance
 - Limited generalization and de-contextualization
 - Limited participation in the learning process
- Technology intimidation = reduced interaction between student and teacher
 - Lack of coaching & modeling by teachers
 - Uncertainty as to influence/role of assistants

Teacher Training

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

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?

Two Teacher Styles

- **Referential Style**
 - Speaking children use lesson-specific words (context)
 - 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” because they are usually 1-word answers
- Forces pre-literate AAC users to have specialized, context-specific 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 words in different situations to build competence in using language
- MORE LANGUAGE = MORE LITERACY

Descriptive Teaching Model

- Valuable for students using AAC to participate actively within regular (and special education classrooms)
- Builds on 2 pillars for teacher success (R. Hurd)
 - Changing expectations of teachers
 - Improving teacher's ability to help
- An approach that uses the “constructivist” approach to teaching and learning
- An approach that supports “thinking” over “regurgitation”
- An approach that is a “better match” for AAC users

Constructivism

- Learning is the result of “mental construction.” Students learn (construct knowledge) by fitting NEW information together with what they already know, not by passively receiving instruction and repeating ideas.
- Allows the student using AAC to focus on the information in the lesson and not on learning new pages and symbols

Application to AAC

- What does the student already have available and is learning/knows?
 - Critical words already in the device
- What “new information” is being taught?
 - Vocabulary words and concepts introduced in the lesson
- Constructivist Approach = DTM
 - Instead of programming more and more words into the AAC device for vocabulary in the lessons, the student communicates those new ideas with high frequency, re-usable words already in his/her vocabulary system.

Bloom's Taxonomy of Learning

- An educational approach for ALL students that looks at learning across 3 domains
 - Physical & motor skills
 - Attitudes
 - Cognitive
- A philosophy that encourages developing of “thinking” skills in the learning process

Cognitive Domain Levels

- Six Levels

See DTM Planning Form

1. Knowledge
2. Comprehension
3. Application
4. Analysis
5. Synthesis
6. Evaluation

**Descriptive
Teaching helps
move ALL kids
through the
domain levels**

Advantages of the DTM

- Helps address more State and National Standards of Education
- Helps coordinate collaborative teaching of IEP Goals

The Descriptive Teaching Model

A PROCESS for teaching and reinforcing use of core language in the classroom - throughout the entire school day

Key Requirements of the DTM

- Four Material Factors:
 - Have 50 - 350 permanently available, appropriate, high frequency, re-usable words and word variations in the student's AAC system (MCB or devices)
 - Have “language-friendly” AAC system designs
 - Access to easy-to-use, teacher-friendly and therapist-friendly visual supports
 - Availability of supplemental, student-accessible curriculum materials designed in a DTM fashion
- Three Human Factors:
 - Team collaboration & lesson planning
 - Practice critical communication partner strategies
 - Strong language therapy (learn to talk – talk to learn)

VOCABULARY

Material Requirement #1

Vocabulary for the DTM

PLAN to give the student
access to 50 - 350

permanently available,

APPROPRIATE, HIGH
FREQUENCY, RE-USABLE
words and word variations

Permanent, Re-usable Vocabulary

- Words to which the student ALWAYS has access
- Words which the student can use across activities
- Words which the student needs to learn to use so he/she can talk when he is not in school anymore

The Process

- List out the PRAGMATIC categories for which you want to have words (NLD approach)
 - Pick the most Frequently Used words for those categories (the first 50) that allow you to **MEDIATE/CONTROL** any activity
- Add more words in the “big categories” that you need to talk descriptively (the next 50 – 100 words)
 - Allow you to **DESCRIBE & COMMENT** with more variety
- Add stuff to expand language based on normal development (about 5 to 20 words)
 - early morphological markers (verb tense, plural, comparative superlatives)
 - “binders” = prepositions, conjunctions, articles
 - Special Symbols (same as, opposite of, part of, sounds like, etc.)

Expanding the Vocabulary

- To your “high frequency, re-useable words” that are permanently available, add....
 - Personal core (key people, places, things)
 - Predictable, generic school needs
 - Colors, numbers, shapes, days, months
 - Alphabet
- Extended vocabulary that is “semi-permanent”

LANGUAGE- FRIENDLY AAC SYSTEMS

Material Requirement #2

Language-Friendly Design Should...

- Promote the easiest possible ACCESS to core vocabulary with my brain & body
 - core words should be the easiest to access
 - short sequences or navigations
 - simple patterns
- Promote MOTOR AUTOMATICITY so I can talk without thinking
 - stable core vocabulary

Manual Communication Boards Designs

- Single Sheet design
 - Everything you can say is on 1 “page”
- Multiple Sequential design
 - You have to turn the page to get more words and when you do you lose access to all the other words you just had
- Multiple Simultaneous design
 - You turn a “section” of your MCB to get some new words, but you don’t lose all your other words

TEACHER & THERAPIST VISUAL SUPPORT MATERIALS

Material Requirement #3

Purpose of Visual Supports

- Raise expectations
 - These are the words we expect SLPs to teach
 - These are the words we “expect” the children to say in class to talk and participate
 - These are the word combinations that we expect them to try and say
- Raise ability to help
 - help you know the codes/navigational paths
 - help you to coach these words and combinations

Designing Materials

- Simple, simple, simple
- Made with accessible software
 - What software does the teacher have in her computer?
- Multiple copies
- Customizable for the students
- “Less is More”
 - NALB

The Purpose of the NALB

- Not designed for the AAC user to “see the codes” or use as a MCB
- Teacher-Therapist reference
 - what words are available - expectations
 - how to say the words – ability to help
- To provide ALgS
 - to prompt use of core words
 - to “model” words during lesson instruction

STUDENT MATERIALS

Material Requirement #4

Adapting Student Materials

- Pen and paper are NOT our friends!
 - Work with OT to assess physical skills and determine how the student can manipulate classroom materials
 - Computer access for written work
 - Bingo dauber or other kinds of markers
- 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, Writing with Symbols, Boardmaker templates

TO DO List

- Give each student you support a set of core vocabulary (8 - 25 - 50 - 350 words) with morphology (as appropriate)
- Design language-friends systems to maximize “stability” and easy retrieval of the core vocabulary
- Create teacher-therapist visual support materials
 - At minimal - design a NALB for any student with a sophisticated AAC device
 - Design additional materials to help remind the teacher-therapists to reinforce use of the stable, core vocabulary
- Modify student materials
 - More “essay” and less T/F, multiple choice, fill-in-blank

Human Factors to Support Talking in Class

1. Team Collaboration & Lesson Planning
2. Communication Partner Strategies
3. Language Therapy

Human Factor 1: Team Collaboration & Lesson Planning

How do you do the DTM?

How do you work with a
teachers/therapists to do this?

Preliminary Preparation

- Understand your school's curriculum, textbooks, and practices
 - How are you applying your state's educational standards?
 - What textbooks are used?
 - What are your current practices to support inclusion?
 - Accommodations vs. Modifications (Zabala, SETT)
 - Level of Participation (Beukelman and Miranda)
 - Use of other AT in the classroom
- What's on the student's IEP?
 - How do IEP goals coordinate with the school curriculum and state standards?
 - What are the therapists doing in support of the curriculum and state standards?

Student's IEP and Economics Lesson

- No specific IEP goals related to “economics”
BUT.....
 - Language goals
 - Vocabulary building = verbs (buy, get, give, wait); adjectives (more, expensive); adverbs (now, later, much)
 - Sentence building (get now, wait later, get more later)
 - Math goals (learn coins, add up money being saved, interpret prices of items, participate in ADL activity of shopping and budgeting)
- DTM supports most IEP goals when there is..
 - good team collaboration
 - use of a set, stable, core vocabulary is emphasized

Team Training

Introducing the Descriptive
Teaching Model to your Team

Step 1: Learn the Class 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, assistants, peers

Step 1: Learn (cont.)

- Review written materials
 - types (textbooks, papers, computer software)
 - accommodations/modification strategies used
 - to access the materials
 - to use vocabulary set and letters available within the AAC system
- Determine how the DTM can help support IEP goals from the therapy team (without making it harder on the teacher)
 - ST - check that the IEP has appropriate language goals
 - OT - check how the OT is supporting access development, modifications of materials, computer access, etc.
 - PT – check how the PT is working on positioning, alternate positions, etc.

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 on the NALB
 - big part land = region
 - water almost all around, water on three sides = peninsula
- Review the questions she is going to ask the students to recall/review, interpret and apply the information
 - Discuss how to evaluate student learning

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: Re-Teach using the NALB

- Describe and practice using 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
 - Show how the words are organized
 - Practice finding words

Step 4: Re-Teach (cont.)

- Re-teach the lesson using the NALB
 - write out some simple definitions of the key words
 - use ALgS to model the key “circled” points with the NALB
 - Do “quick reviews” with the AAC student
 - Ask the aide to assist, as appropriate

Step 5: Dealing with Concerns

- “I can’t do this kind of modeling for an entire lesson. I’ll lose control of my class.”

Concern #1: Modeling Entire Lesson & Class Control

- Implement initially in small group activities
- Implement for only 1 lesson/day (initially)
- Do it for only part of the lesson or for only the 2 – 3 key content words of the lesson
- Train the aide to do it in 1:1 teaching times for the remaining key points of the lesson
- Give every student a photocopy of the AAC display being used by the student and get everyone involved learning like he/she does for at least 1 lesson/day

Step 5: Dealing with Concerns

- “I can’t stop everything and ask the student using AAC to give me all the answers. It will take too long. Besides, these descriptive definitions are too long because the student isn’t able to give more than 1 or 2 words at a time.”

Concern #2 – All and Long Answers

- Find at least 1 or 2 opportunities for the student using the AAC device to participate descriptively in the lesson with the teacher (“orally”)
- Train the aide to help the student discuss the points of the lesson descriptively during 1:1 times (“orally”)
- Define how much the student needs to say to show you he/she has grasped the concept?”
 - Strait = little, not wide (narrow) water way that joins one body of water with another
 - acceptable examples: little, join one to one, narrow water way
- Modify paper materials for ?% of answers
 - ?% descriptive (essay-like)
 - ?% T/F, multiple choice
 - ?% fill-in-the-blank (referential)

Step 5: Dealing with Concerns

- “I need more words, and what do I do if I absolutely HAVE to have the student say these content words.”

Concern #3: More Core and Content Words

- The words on the NALB are “expanded” with 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	

- The goal of Descriptive Teaching is to eliminate continuous programming of content words, but DT should be “balanced” with other ways to review and test knowledge.
 - Temporary solutions – Put content words ...
 - On quick & dirty topical manual boards or sticky notes
 - On NALB written in erase-able marker in “short term parking”
 - With worksheets and other materials when “content words” are emphasized
 - Bingo daubers to mark answers
 - Modify worksheets

Step 5: Dealing with Concerns

- “I will never be able to do this after you are gone.”

Concern #4: Lesson Plans

- Offer to co-teach for several 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
- Show the teacher “lessons” organized by other teachers
- Offer the use of a pre-developed Lesson Planning form, if needed

Subject Area: Science, The Nature of Matter

Textbook/Material Information: Sunshine State Standards - Strand 1, Benchmark 1

Curriculum Goal: The student knows that objects can be described, classified, and compared by their composition and physical properties

Other: knows objects have different properties, can be grouped by properties

Date Developed: 9-21-07

By: Ms. Martin

Key Concepts of the Lesson

1. Color words
2. Shape words
3. Form words
4. Texture words
5. Size/Weight words
6. Effects of Heating and Cooling

Content Words/Vocabulary

Word/Concept	Need to say? Y/N	In/Added/Defined/ Temp/WAS	critical Definition/WAS
color words	YES	all in	(see RAINBOW)
shape words	YES	all in	(see TRIANGLE)
texture words	YES	all in	(see FINGER)
size/weight words	YES	all in, but "size" - ADD	(see ELEPHANT, DICE)
form words	YES	only "straight"; define/WAS others	flexible = easy to move
			stiff = hard to move
			curve = go this way, that way, OPPOSITE OF straight
solid	YES	define	hard all the way through
liquid	YES	define	move easily, but not in all space
gas	YES	define	move easily to take up all space
evaporate	YES	define and TEMPORARY	change and go away

Teaching/Testing Plans

Learning Activities	ALgS Provided	Support Materials	Evaluation
<p>Given a set of objects of different color and shape properties - sort and describe them, sort at least 2 different ways</p>	<p>Demonstrate classifying of words. Model "these" "all" "color/shape." "They" "all" "same" and "go" "together."</p>	<p>Objects and NALB</p>	<p>Will describe the characteristics of the different sets created with color and/or shape words. Ask "why did you put these together?" Accept: all same, colors words, shape words</p>
<p>Given a set of objects with different textures, sizes, and weights, compare the various objects and describe.</p>	<p>Demonstrate and describe. Model "this" and "that," "feel" and "er" and "est" endings. Use "not" and "opposite" to discuss comparative concepts.</p>	<p>Objects and NALB</p>	<p>Will compare at least 3 pairs of objects. Will be asked to identify the comparative objects in 2 ways. (1) Point at "Which one is". (2) Describe when asked "Tell me about this one and this one." (big/bigger, feel soft)</p>
<p>Do a simple science experiment with water - liquid state, frozen state, steam/gas state.</p>	<p>Model "hot," "cold," "very cold," "hard," "move easy," "more hard" and "change" to describe the conditions.</p>	<p>NALB</p>	<p>Tell me what you need to do to make it hard. (cold) Tell me what you need to do to make steam. (hot) Accept: make hot, make cold, very hot, very cold</p>
<p>Complete worksheet.</p>	<p>None - Work independently with aide</p>	<p>Modified Worksheet - adjust to 5 questions with answers of 1 - 2 critical words. NALB at work station.</p>	<p>Use computer version of worksheet. Check worksheet and grade.</p>

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
- Independent or small group working time
 - Create “stations” with NALB posted
 - Use peer helpers

Human Factor 2: Communication Partner Skills

Communication Partners will learn how to MODEL, PROMPT, and RESPOND in ways that encourages the student using AAC to produce language with the set, stable core vocabulary

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

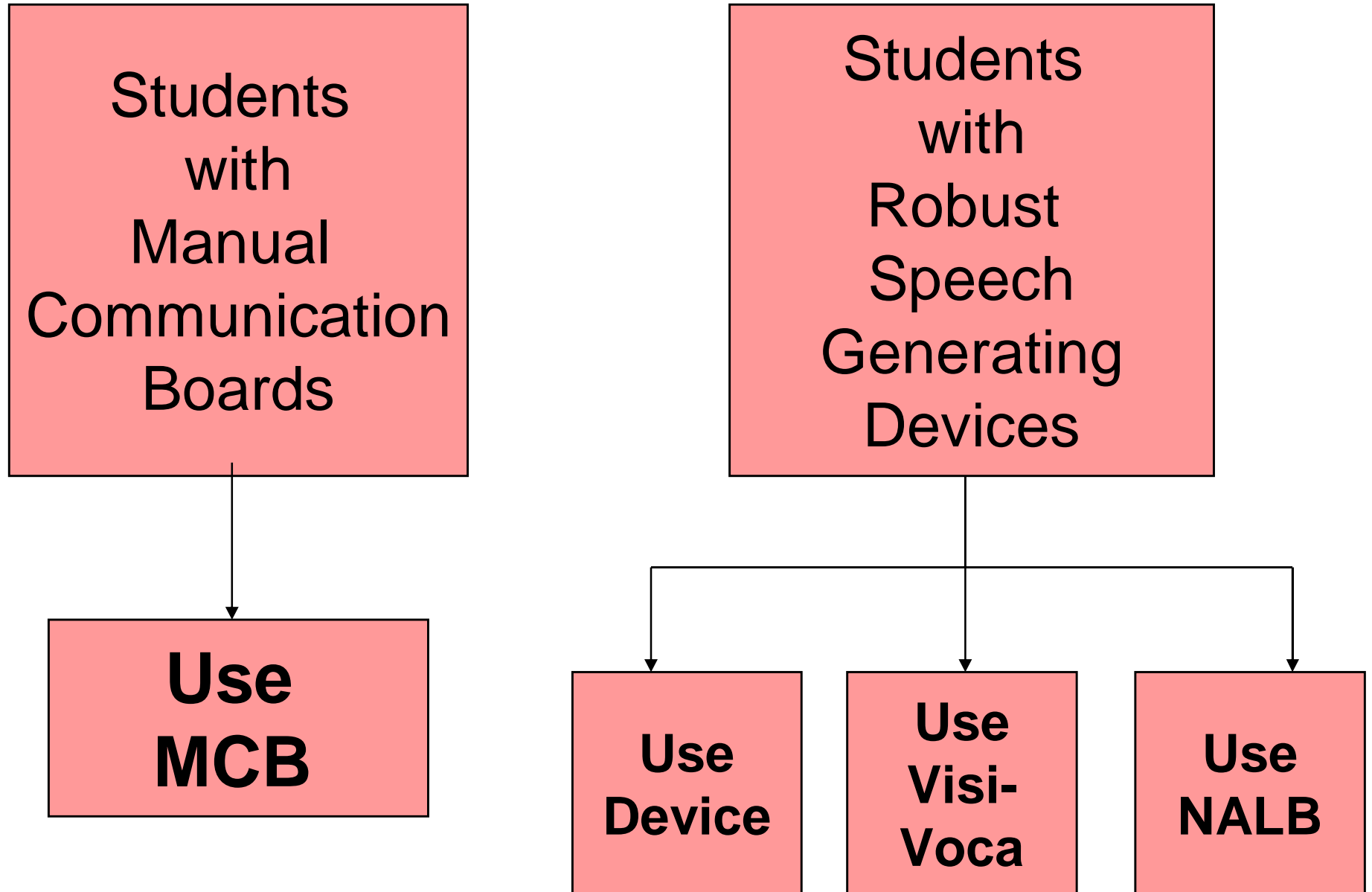
Modeling - Aided Language

- 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



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)
 - Broad Prompt = “Tell me about him (the lead dog) (Watch & Wait)
 - Focused Prompt = “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 models (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

Human Factor 3: Language Therapy

Building Towards Greater
Language Competence

Language Competence

- Most students using AAC are learning to use words for the first time (think in head/access on device-board)
- Most students have reduced vocabularies (head/device) and reduced understanding of how words go together (in head)
- The DTM is a “language-rich” strategy
 - It supports use of language in the classroom, but does not eliminate the need for language intervention in the therapy setting to reach the student’s highest level of competence

Language Therapy & DTM

- Focus initially on the STABLE, CORE VOCABULARY and Emerging Syntax/Morphology
- Do additional therapy in modified ways
 - Pragmatics
 - Vocabulary
 - Syntax
 - Morphology
 - Discourse

1 - Pragmatic Teaching

- Partner Prompt & Response Strategies are key pragmatic behaviors - setting the stage for interaction
- Use Traditional Routines
 - Establish environments/set-ups that provide communication opportunities
 - Modify your behaviors to promote communication initiation
 - Create barriers
 - Feigned stupidity
 - Provide logical consequences

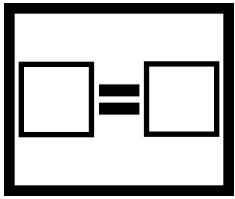
2 - Vocabulary Teaching

- 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

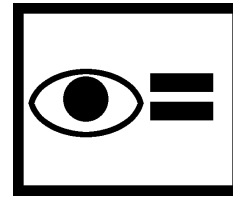
Vocabulary Teaching

- For pre or non-literate individuals, vocabulary is represented with pictures and these pictures have to be taught
 - Visual conventions (arrows, wavy lines)
 - Metaphors – visual, experience, abstract
 - Vocabulary versatility
- For “aided” systems, these pictures have to be “organized” and the organizational strategies have to be taught
 - Semantic organization
 - Grammatical organization
 - Situational/environmental organization
 - Visual scenes

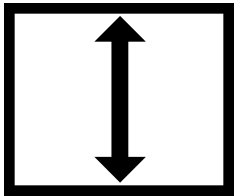
Versatility with Word Altering Strategies



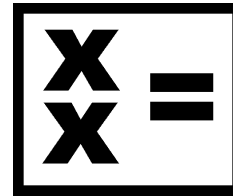
- Same as



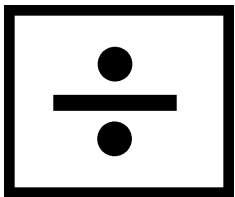
- Looks like



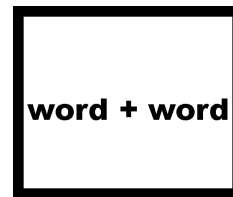
- Opposite of



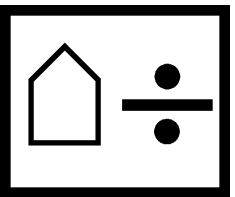
- Same Group



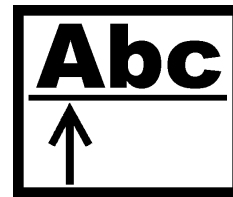
- Part of



- Join Words



- Picture Part of



- Starts with (letter)

Supporting Organizational Learning

- Traditional Strategies
 - Color coding
 - Grouping
 - Visi-Voca (for devices)
 - “Charts” to learn “full group”
 - Word webs to teach “relationships” between words and codes
- Allow AAC user to “add” new vocabulary themselves
 - Maintain consistency in the “rules” of the organization

3 - Teaching Syntax and Morphology

- MODEL MODEL MODEL
- Use standard SLP materials with modifications
- Color code Parts of Speech on AAC Systems
 - Write out words & sentences in color code
- Self-evaluate language from LAM samples
- Teach a need for a variety of word groups using a “metaphor” the student understands
 - “rainbow” of words = sentence
- Use metaphors and music to teach grammatical classes
 - Humanization of language*

Color Code and Humanize Groups

- **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**

4 – Teaching Discourse

- Social conversation is a HUGE issue for most AAC users
 - “Learned passivity”
 - Egocentric, needs-based communication
 - Individuals “on the spectrum”
- Implement social communication curriculum with modifications for special AAC issues
- Work on Narrative Development

Summary of the DTM Process

- **Teach** the lesson with the critical vocabulary
 - Identify referential vs. critical thinking questions that are already part of the lesson plan
 - Re-define referential, content words **DESCRIPTIVELY** with the available critical vocabulary
 - Use Visual Support Strategies for the teacher
 - Modify current curriculum materials for the student

Summary of the DTM

- **Talk about/Review** the information with the AAC student
 - Train assistants to model simultaneously
 - Provide immediate review using the student's AAC system
 - Create application materials that focuses on the stable, critical core vocabulary

Summary of the DTM

- **Test** the lesson with the critical words
 - Shift from referential questions (“Where is the Iditarod held?”) to descriptive questions (“Tell me something about the Iditarod.”)
 - Determine evaluation protocols, based on the descriptive teaching and review provided to the student

Objectives Outcomes

(with individuals with significant disabilities)

- Approach used in 2 ESE classrooms and 4 adult programs (severe cognitive disabilities)
- Personal AAC systems (P-AACS)
 - January 2007 = 0/24 individuals had no P-AACS
 - January 2008 = 24/24 individuals had P-AACS
 - 22/24 = manual communication boards only
 - 2/24 = devices with matching manual communication boards
- Vocabulary acquisition
 - 2/24 = over 100 core words
 - 8/24 = 76 – 100 core words
 - 10/24 = 51 - 75 core words
 - 3/24 = 26 - 50 core words
 - 1/24 = 1 – 25 core words

Subjective Outcomes – Regular and ESE Team Reports

- More active and independent participation in activities by the AAC users
- More diverse language produced (beyond nouns)
 - Marking action (verb), condition (adjectives) and time and place (adverbs, prepositions)
- More use of P-AACS with more communication partners across more activities and settings (generalization & de-contextualization)
- More language modeling by partners
- Less time spent by the teachers making stuff

Why Give the DTM a Try?

- The Descriptive Teaching Model involves a moderate SHIFT in how teachers Teach-Talk with-Test students using AAC.
- Most individuals using AAC systems can use at least a small set of core words
- A lot of good “normal” communication can occur with only a small set of words when they are “core” to everyday life