The Pixon Project: Supporting an AAC Language Development Curriculum
By Gail M. Van Tatenhove, PA, MS, CCC-SLP

ASHA Disclosure
• My name is Gail Van Tatenhove. I am a part-time employee of Semantic Compaction Systems, the copyright owner of Minspeak®, Unity®, and Pixons.* I will be talking today about the Pixon Project and the Pixon Project Kit.* I was the team leader for the Pixon Project and am the author of the Pixon Project Kit (PPK).
• The PPK is solely owned & sold by Prentke Romich Company. I receive no compensation or royalties from the sale of the PPK.

ASHA Disclosure

Website Resources
• Minspeak.com
  – Teachers & Therapists
    • Intervention Planning (http://www.minspeak.com/teachers/InterventionPlanning.php)

Website Resources

Pixon Project Kit Availability
• Full Kit available
  – In USA from Prentke Romich Company
    • PXK-1 (part to order)
    • $149.95 (plus shipping and handling)
  – In USA from AAC Institute (AACI)
    • http://www.aacins2tute.org/Resources/ProductsandServices/Pixons/index.html
    – In Australia & UK from Liberator, Ltd.
• Extra Cloth Carrying Cases (without any inside picture displays)
  – Available from Gail M. Van Tatenhove, PA & AACI

Website Resources

Pixon Project Kit Availability

Newsletters
• Go to www.minspeak.com
• Sign up for the Minspeak e-newsletter
  – Intervention Plans
  – Teaching Materials

Newsletters

Pixon Project Resources

Roots Behind the Pixon Project

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Core Vocabulary that Promotes Emerging Generative Language

The Driving Force behind the Pixon Project and the Pixon Project Kit

How important is CORE?

- Frequently used vocabulary with preschool children has been studied (Beukelman, et.al., 1989; Fried-Oken, et.al., 1992; Banajee, et.al., 2003)
  - A lack of nouns in the most frequently used words
  - Core dominates
    - 50 core words = 60% of what preschoolers say
    - 100 core words = 73% of what preschoolers say
    - 250 core words = 85% of what preschoolers say
  - Core is consistent across place, topic, cognitive ability

Simple Words – Complex Structures

- Syntax/Morphology
  - Longest Intelligible Utterance = 6.0 morphemes
    - See that can’t stand up
  - Mean Length of Utterances
    - Morphemes = 2.77

- Brown’s stage 2 (+/- 21 to 30 months)
  - Noun phrase – uses demonstratives
  - Verb phrase – main verbs and present progressive
  - Auxiliaries – using “can”
  - Yes/no questions – using rising intonation
  - Negation – in proper place, using contraction
  - Personal pronouns – uses it, I, me

The Pixon Project Kit

Manual

Manual includes 6 CDs with EVERYTHING in eFormat

Copy all the CDs onto your Computer Hard Drive!

The GOAL???

Talking to Answer or Talking to Talk

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2 of 10 pre-made MCBs in the box

50 Location Board
Portable Cloth Carrying Case

What do I need to know about Pixons?

• Single Meaning Pictures (SMPs)
  – 1 picture = 1 word

<table>
<thead>
<tr>
<th>play</th>
<th>win</th>
<th>lose</th>
<th>little</th>
<th>game</th>
<th>these</th>
</tr>
</thead>
</table>

with a TWIST

Why base Pixons on Unity?

• **Build** language to get ready for a speech output device
• **Bridge** as paper teaching materials for the Unity® program
• **Back-up** system to Unity® device (e.g., Vantage, Accent, Eco)

A Picture System

• Pixons are a PICTURE SYSTEM because Unity® is a systematic use of pictures to code vocabulary
  – what you know about 1 picture helps you interpret another picture
  – the more you learn, the less you have to learn from scratch

Core Vocabulary and Pixons

400+ Pixons for core words on CD

• Approximately 200 core words are represented in the pre-made materials based on frequency of use & commonly found on MCBs
• An additional 200 +/- core words available on the Pixon Picture CD
• More core words available at Minspeak website (as developed)

Extended Vocabulary and Pixons

1200+ Pixons for extended words on CD

• More extended words available at Minspeak website (as developed)
• Are usually, but not always nouns
  – Often picture producers
  – Easy to represent with nearly any kind of graphic
• Have “options” based on Semantic Categories
  – How is the word “categorized” in the Unity program?

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Example “Options” for Pizza

- Option 1: Word picture only
- Option 2: FOOD Category marker + Word picture
- Option 3: FOOD Category and ITALIAN FOOD Sub-Category markers + Word picture

Which Option to Use?

- On Manual Boards
  - Option 1
  - Put the Category and/or Subcategory pictures on the tabs to locate the appropriate category
- On Other Visual Support Materials
  - Option 2 or 3
  - So that you point out the category/subcategory to find that word on the flip sections of your MCB

Using Pixon Pictures

- All Pixons are in an electronic format
  - BMP format to use with ANY software program – CD5
  - Importable Boardmaker© file – CD6
  - Importable into PRC devices
- Practical use of Pixons with Boardmaker
  - Importing into Boardmaker
  - Use by families, aides, peers, etc.

Pixons

- Nouns – a category or subcategory icon in lower right corner
- Verbs – look for Mr. Action Man, NO eggheads
- Adjectives – multiple options, style of arrows
- Prepositions – tell a story, NO purple blobs
- Check style of picture

Pixons and PCS

1. How much are you using CORE vocabulary vs. extended vocabulary on your picture displays and with your self-made visual support materials?
   - Do an analysis of the vocabulary you are currently representing with PCS by listing the words represented on your current boards/materials.
   - Determine how big of a change it will be to replace PCS with Pixons for core words.

Pixons and PCS

2. How different are Pixons from PCS for CORE?
   - Not that different for many core words
     - Use many similar metaphors
   - Extended vocabulary – which are often picture producers – we don’t worry about replacing

3. When might Pixons be easier to teach than PCS?
   - Visual Images vs. Conceptual Metaphors & Stories
Pixons and PCS

4. How much are you asking students who already have PRC devices with Unity to use PCS pictures for core vocabulary on self-made and published materials?
   – Use PASS software to author materials with their icons sequences
   – Use Pixon materials that are at least coordinated better with their program

Putting the Pixons in Boardmaker®

**Option 1**
- Take the BMP pictures (CD 5) and import them in ONE-BY-ONE
  - When new Pixons are created
  - As a last resort if your version of BM won’t accept the Pixon BM My Symbols Folder.
- Follow the Boardmaker steps for how to do this.
- You can open this file and look at each of the pictures.

**Option 2**
- Import the Boardmaker File (CD 6) of ALL Pixons into your Boardmaker Application Folder
  - Get the INSTRUCTIONS for doing this at the Minspeak website.
  - FOLLOW the STEPS EXACTLY.
- This file doesn’t “open” on your computer so don’t try and do that. NOT READABLE!

• Step 1: Boardmaker App on Your Computer
  – Open your Applications Folder on your Hard Drive
  – Find your Boardmaker App
  – Open the Library/Symbol Folder
  – Find the My Symbols folder and RENAME it My Symbols1

• Step 2: From Pixon CD 6
  – Copy the folder called My Pixon Symbols to your hard drive. (It takes a while.)
  – Rename it My Symbols (take out the word Pixon)

• Step 3: Put Pixons into Boardmaker
  – Slide the My Symbols Folder from your hard drive into the Boardmaker Library/Symbol Folder. (NOT into the My Symbols1 folder.)

• Step 4: Index the Pixons into Boardmaker
  – Launch Boardmaker and WAIT.

The Pixon MCBs

- Developed to assist families, teachers, and SLPs to begin AAC intervention without developing the necessary expertise or confidence to make their own communication boards
- Not all possible boards can be developed to meet the needs of ALL children using Pixons, nor can the boards provided reflect all the possible creative designs that could be made

Pixons “Core” Communication Boards

- Ten pre-made boards
  – Two boards ready to use “out-of-the-box”
  – All 10 boards on a CD so support teams can personalize & customize them
    • Stationary, laptray-style (7)
    • Stationary, eye point style (2)
    • Portable, carry-case board (1)
- Board designed with varying number of targets (20 – 300)

Pixon Board Designs

- Single sheet design emphasized
  – Facilitates aided language stimulation
  – Encourages language production
- Multiple simultaneous design for ambulatory users
- Multiple sequential designs must be custom developed
  – PODDs translated with Pixons
    • Single page opening – 9, 12, 16, 20
    • Proof of Purchase of PODD to GVT (NOT PRC)
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Design Features
- Visual features to maximize linguistic and cognitive organization
  - Color code
  - Grammatical-Semantic-Alphabetic
  - Left-to-Right
- Maximum number of words for core words
  - 1–3 words “assigned” to a picture
  - Some “word pairs” for opposites in a single picture

Color Coded “Sections” on MCB
- People/Pronouns = Yellow
- Verbs = Green
- Prepositions/Places = Purple
- Adjectives = Blue
- Time/Adverbs = Blue
- Interrogatives = Pink
- Negation = Red
- Nouns/Determiners = Orange
- Conjunctions = Gray
- Special Symbols = White
  Similar to color code used with Unity MAP, Blissymbols, & Fitzgerald Key – NOT same as Goossens’, Elder, & Crain

What’s in the Flip Section?
- Supplemental Core = frequently used, predictable words - they would be in the “core” section if there was enough room
  - Polite words
  - Colors
  - Numbers (0-9)
  - Shapes
  - Alphabet
- Category Icons on Tabs

Flip Section = Extended Vocabulary
- More “personalized” words, driven by interests and activities
- Pre-Selected
  - Circle time (days, seasons, months, weather)
  - Numbers (10-31) and Time words (o’clock)
  - Music
  - Books
  - Art
  - Cooking
  - Body parts
  - Money

Activity-Based Displays
- Stand-alone displays
- Samples developed
  - Alphabet (ABC & QWERTY)
  - Time Concepts*
  - Money
  - Music
  - Cooking
  - Reading*
  - Calendar Time

Points for Discussion
- Using a CORE board for an activity vs. an activity board
  - motor automaticity
  - spontaneous vocabulary use
  - additional vocabulary not on current personal core board
- DeSoto Trails and Buck Lake Elementary Schools

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Points for Discussion
• Customizing Pixon Boards
  – For vision (remove/change background color, enlarge and split into “pages”, enlarge core boards)
  – For access (encode, spacing between cells, etc.)

Points for Discussion
• Creating Pixon boards as back-up systems
  – Using SMP vs. using icon sequences on the back-up vs. using multiple words above single overlay
• Create Pixon PECS books with modified wall chart materials
• Use Pixon-ated PODDs

Educational & Environmental Materials
• The Pixon Project Kit includes materials to help support teams teach and use core vocabulary throughout the day
• All are pre-made on a CD and must be printed and constructed by the support team
• Lots of stuff, but most only using 2 things
  – Object & Descriptive Labels
  – Wall Chart

Object & Descriptive Labels
• To “label” objects in the environment (what is)
• To “label” objects in the environment descriptively (what do)

Communication Board Wall Chart
• A “word wall” based on the SLT-198 board

Using the Wall Chart
• Hold up specific Pixons for students who can only handle 1 to 3 Pixons presented at a time
• Use with ambulatory kids who are making a transition from PECs system to a Pixon board
• Use for Aided Language Stimulation during classroom lessons
• Pull off Pixons for sentence building activities
• Pull off Pixons to label “objects” descriptively

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Descriptive Labeling

Application in Classrooms
What other materials do you use in your classroom that you need developed with Pixons?

- Educational Materials
  - Story boards
  - Reading boards (to use with all students)
  - Game boards
  - Song boards
  - Reading materials
  - Sequencing activities
  - Social stories

- Environmental Materials
  - Visual Schedules
  - Specific Activity Boards
  - Calendar Time

Story Board Mask - 2 Repeated Lines

- I am go(ing) (to) eat you up.
- Do not eat me up.
- Created a “mask” to cover over the non-target words in the two story lines.

Story Board File Folder Boards with Multiple Lines

- A “script” = re-phrased with core words
- Those words are placed on the story board in the same configuration as the person’s communication board.

Implementing the Curriculum

The Pixon Language and Learning Activity Notebook

The PLLAN is ...

- Based on natural child language acquisition model and ...
  - Encourages communication of a range of pragmatic functions
  - Focuses on the use of core vocabulary without ignoring words for ADLs
  - Supports development of early morphological markers
  - Promotes use of aided language stimulation to encourage production of 2 and 3 word utterances
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“Manual” Part
- Descriptions of the stuff in the Kit
- TO DO Lists for making the stuff in the Kit
- Resources of other stuff

You need to know how to ...
- Develop a readable physical signal/access
- Cultivate a shared focus of attention
- Support development of intentional communication
  - Preferences
  - Discrimination
  - Reinforce-ability
- Build word-symbol association

“Implementation” Part
- Philosophy and rationale
- Factors for designing and selecting a MCB
- Forms for profiling the person and tracking outcomes (Appendices)
- Eight General Intervention Principles
- Twelve Language Learning Modules
- Nine Implementation Q & A’s

Eight Intervention Principles (Reviewed in PLLAN)
1. Readiness to Learn
   - Sensory integration
   - Vision and hearing challenges
   - Positioning requirements
2. Fun and Functional
   - Put the “fun” back into functional
   - Serves a personal function or purpose (other than just basic needs)

Eight Intervention Principles
3. Person-Directed
   - Follow the person’s lead
   - Build on the person’s interests
   - Carefully use barriers
   - Be surprising and novel
   - React naturally
   - Be honest about communication attempts (recognize and define)
4. Model Language
   - Verbally
   - With Aided Language Stimulation

Eight Intervention Principles
5. Descriptive Talking
   - Talking in “definitions”
6. Context to De-Contextualization
   - Learn by location
   - Teach language and pictures in context
   - Use visual props
   - Expand contexts
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Eight Intervention Principles
7. Visual Masking
   – Focus on target words
   – Reduce random selections
   – Reveal new words quickly
   – Reduce development & construction time
   – Support long-range language planning
   – Limits aided language stimulation
   – Limits person-directed initiation of new words
   – Has impracticalities outside of controlled settings
8. Measure and Document Outcomes

Three Key Core Vocabulary Teaching Approaches
- Exposure
  - ALgS
  - Descriptive Teaching
  - Environmental Engineering
- Motor Plans
  - Guided Repetition
  - Immediate Results
- Language Instruction
  - Concept
  - Picture Metaphor
  - Semantic Webs

This approaches are used and written about throughout the PLLAN. But you need to SEE them in action!

While Watching the Video
- Vocabulary – VISUALLY MODELING
- Vocabulary students need to say
- Engineering of Activity
  - Environmental Communication Training (ECT) meets PPK
- Prompts, assistance, modifications are made for students
- How improve?

The Modules in the PLLAN
- Twelve modules
- Designed to introduce 150 core words
  - Based on language function and word groups
- Each module provides instructions for ...
  - Teaching the words in activities (geared to SLP)
  - Providing Aided Language Stimulation
    - To prompt the child
    - To expand the child’s utterance

Example: Module 1
- Title: Initial Mediating/Regulating of Activities
- Purpose: To encourage the person to direct the behavior of others and/or the course of any activity with words instead of behavior

Example: Module 1 (cont.)
- Target Vocabulary: 10 words
  1. again
  2. all done/finished
  3. all gone/gone
  4. different
  5. do
  6. help
  7. look
  8. more
  9. stop
  10. what
  11. not/don’t
  12. want
  13. like

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Module 1: Goals
1. The AAC user will request a repetition of the same activity or an aspect of the activity using the word “again.” (function – request recurrence)
   – AlgS = “do again,” “go again,” “that again”
2. The AAC user will comment on the completion of an action, using the word “all done.” (function – comment, cessation)
   – AlgS = “it all done,” “all done that,” “all done now”

Module 1: Goals
5. The AAC user will direct actions in the activity using a word, such as “do.” (function = direct or state action)
   – AlgS = “do different,” “do that,” “I do,” “do more”
6. The AAC user will ask for “help” when he/she is unable to do something independently before or during the activity. (function = request assistance)
   – AlgS = “help me,” “want help,” “I help you”

Module 1: Goals
9. The AAC user will request completion of an activity, using the word “stop.” (function – comment, cessation)
   – AlgS = “want stop,” “stop now,” “stop this”
10. The AAC user will ask “what” when he/she doesn’t know about an object or activity. (function = request information)
    – AlgS = “what that,” “what do,” “what there, “what in”

Module 1: Goals
3. The AAC user will say “all gone” to show that he/she recognizes that something is missing or depleted. (function = disappearance, nonexistence)
   – AlgS = “it all gone,” “that all gone”
4. The AAC user will request a change in activity or object, using the word “different.” (request action, directive, comment)
   – AlgS = “do different,” “different thing”

Module 1: Goals
7. The AAC user will call attention to something that is out of the ordinary using a word, such as “look.” (function = existence, request action, direct attention)
   – AlgS = “look that,” “you look,” “look there”
8. The AAC user will ask for “more” of something during the activity. (function = request recurrence)
   – AlgS = “more that,” “want more,” “like more”

Module 1 “Script” Cards - to Train Others
• Order of words
• Creating the opportunity
• Prompting guide
• Responding guide
• Script cards
  – Module 1 Script Cards

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### Module 1: Teaching Routine

**Provide the “materials” of the activity to the person in such a way that he/she doesn’t know what the activity is all about (e.g., put them in a container, bag, or other barrier).**

<table>
<thead>
<tr>
<th>What</th>
<th>Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help</td>
<td></td>
</tr>
<tr>
<td>Look</td>
<td></td>
</tr>
<tr>
<td>All gone/gone</td>
<td></td>
</tr>
<tr>
<td>More</td>
<td></td>
</tr>
<tr>
<td>Do</td>
<td></td>
</tr>
<tr>
<td>Again</td>
<td></td>
</tr>
<tr>
<td>All done/finished</td>
<td></td>
</tr>
<tr>
<td>Different</td>
<td></td>
</tr>
</tbody>
</table>

**Create a barrier or difficulty so the person needs to request assistance.**

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<td>All done/finished</td>
<td></td>
</tr>
<tr>
<td>Different</td>
<td></td>
</tr>
</tbody>
</table>

**Options to Implement:**

- Look at the materials in the container, but don’t take them out.
- Do something very out of the ordinary with some of the objects and draw attention with “look.”
- Spend time looking at the materials you brought (book, cards, iPad game, etc.)

<table>
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</tr>
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<td>All done/finished</td>
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<tr>
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<td></td>
</tr>
</tbody>
</table>

**Model and prompt the word “what.”**

- I brought some new things for you today and you don’t know “what” they are.
- You need to ask me “what” I brought.
- Say the word “what” to find out “what” I brought.

**Expand**

- “what in,” “what there,” “what in there”

**Model and prompt the word “help.”**

- Sometimes I have to “help” you do things.
- Let me know if you need “help.”
- Say “help” and we’ll do it together.

**Expand**

- “help me,” “you need help,” “I help you”

**Model and prompt the word “look.”**

- You can “look” at what I brought.
- You need to ask to “look.”
- Say “look” to see what I brought.

**Expand**

- “I look,” “want look,” “I want look”
Module 1: Teaching Routine

• During activities involving objects (snack, art supplies, cooking), forget or lose one of the key materials for the activity. Or don’t give the person enough of something needed so he/she runs out and has to say “all gone.”

  • What
    – Help
    – Look
    – All gone/gone
    – More
    – Do
    – Again
    – All done/finished
    – Different
  • Stop

Module 1: Teaching Routine

• Model and prompt the word “all gone/gone.”

  • How?
    • Expand

Module 1: Teaching Routine

• During activities involving objects (snack, art supplies, cooking), use “moderation” with the materials, encouraging the person to ask for “more” of something.

  • What
    – Help
    – Look
    – All gone/gone
    – More
    – Do
    – Again
    – All done/finished
    – Different
  • Stop

Module 1: Teaching Routine

• Model and prompt the word “more.”

  • How?
    – There’s some “more” over here if you need it.
    – You can have “more” of that if you want.
    – Say “more” to get “more” (object)
  • Expand
    – “want more,” “more that,” “want more that”

Module 1: Teaching Routine

• Continue participating in the activity, emphasizing a variety of actions.

  • What
    – Help
    – Look
    – All gone/gone
    – More
    – Do
    – Again
    – All done/finished
    – Different
  • Stop

Module 1: Teaching Routine

• Model and prompt the word “do” for a variety of the actions (e.g., color, glue, cut, tie).

  – I can do lots of things.
  – I’ll do it. You tell me when you’re ready to do it.
  – Say “do” and you can do it too.
  • Expand
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Module 1: Teaching Routine

- During activities involving action (music, reading, cooking), use moderation with the action.
- Model and prompt the word “again.”
- Expand
- What
  - Help
  - Look
  - All gone/gone
  - More
  - Do
  - Again
  - All done/finished
  - Different
- Stop

Module 1: Teaching Routine

- If you are using a variety of materials/actions, decide when you are “all done” with one of the objects/actions (but not finished with the activity).
- Model and prompt the word “all done.”
- Expand
- What
  - Help
  - Look
  - All gone/gone
  - More
  - Do
  - Again
  - All done/finished
  - Different
- Stop

Module 1: Teaching Routine

- If you’re not done and have other things to do or use, encourage the person to indicate he/she wants to select an alternative activity or object.
- Model and prompt the word “different.”
- Expand
- What
  - Help
  - Look
  - All gone/gone
  - More
  - Do
  - Again
  - All done/finished
  - Different
- Stop

Module 1: Teaching Routine

- Eventually, the activity comes to an end. (Also, at any point in the activity, the student has the option of asking to “stop” if s/he is bored, irritated, or ready to be left alone.)
- Model and prompt the word “stop.”
- Expand
- What
  - Help
  - Look
  - All gone/gone
  - More
  - Do
  - Again
  - All done/finished
  - Different
- Stop

Using Module 1 Core in Any Activity
Step 1: Select Activity

Step 2: Form Your Plan

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“Training Others” Activity

- Break into groups.
- Discuss how you would do the same 10 words in 3 other activities.
  - Cooking
  - Art Project
  - Laundry
- Write out a simple “script” for the activity.
- Role play the activity

1. what
2. help
3. look
4. again
5. all gone/gone
6. do
7. more
8. different
9. all done/finished
10. stop

Modules 1-12

The PLANN takes the 150 targeted core words and break them into Modules for organization and record keeping.

Repetition with Variety ....

Do the same activity, but target different words
or
Do a different activity, but target the same words.

Moving Through Module 2 - 12

- Modules 2 – 12 introduce another 140 words & each module has words that serve 1 primary communication function
- NO single routine is provided to try and teach all words in modules 2 – 12
- REPETITION with VARIETY
  - Do a different activity, but target the same words
  - Do the same activity, but target different words

Module 2

- Title: Expressing Self, Others, and Possession
- Purpose: to define a sense of self in relationship to others
- Target Vocabulary: 19 words
  1. father
  2. he-him-his (3 words/1 picture)
  3. I...
  4. me-myself (2 words/1 picture)
  5. mother
  6. my-mine (2 words/1 picture)
  7. she-her-hers (3 words/1 picture)
  8. they-people (2 words/1 picture)
  9. we-friend (2 words/1 picture)
  10. you-your (2 words/1 picture)

Module 3

- Title: Expressing Negation and Negatives
- Purpose: to encourage the person to direct the behaviors of others using negated concepts
- Target Vocabulary: 6 words
  1. break/broken
  2. don’t
  3. not
  4. problem
  5. trouble
  6. wrong

How do you create and apply the “life lesson” and words from this story?

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### Module 4
- **Title:** Regulating Time Aspects of an Activity
- **Purpose:** to encourage the person to communicate time ideas in order to direct activities and the pace of activities
- **Target Vocabulary:** 6 words
  1. fast
  2. later
  3. now
  4. slow
  5. wait
  6. ready

### Module 5
- **Title:** Requesting and Directing Actions
- **Purpose:** to expand the person’s ability to request and direct action with more specific action words
- **Target Vocabulary:** 14 words
  1. come
  2. get
  3. give
  4. go
  5. have
  6. make
  7. put
  8. say-tell
  9. see
  10. take
  11. turn
  12. want
  13. watch
  14. **watch**

### Module 6
- **Title:** Describing and Commenting on an Activity
- **Purpose:** to express understanding of descriptive ideas of an activity and express an opinion
- **Target Vocabulary:** 20 words in 10 word pairs
  1. big-little
  2. clean-dirty
  3. easy-hard
  4. empty-full
  5. good-bad
  6. hard-soft
  7. hot-cold
  8. loud-quiet
  9. old-new
  10. wet-dry

### Module 7
- **Title:** Requesting Objects and Stating Their Existence
- **Purpose:** to learn how to talk about objects generally without using or needing a specific object word
- **Target Vocabulary:** 10 words
  1. all
  2. it
  3. one
  4. place
  5. some
  6. stuff
  7. that
  8. thing
  9. this
  10. way

### Module 8
- **Title:** Stating and Directing Locations
- **Purpose:** to state locations and direct the placement of objects and actions
- **Target Vocabulary:** 11 words
  1. on-off (2 words, 2 pictures)
  2. in-out (2 words, 2 pictures)
  3. up-down (2 words, 2 pictures)
  4. over-under (2 words, 2 pictures)
  5. away (2 words, 2 pictures)
  6. here (2 words, 2 pictures)
  7. there (2 words, 2 pictures)

### Module 9
- **Title:** Requesting Information
- **Purpose:** to ask questions in order to gain information
- **Target Vocabulary:** 6 words
  1. question
  2. who
  3. when
  4. where
  5. why
  6. how
  * “what” was introduced in Module 1
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Module 10
- Title: Stating Personal Attributes and Feelings
- Purpose: to use descriptive concepts to state personal attributes, such as appearance and feelings
- Target Vocabulary: 19 words
  1. afraid
  2. am-is-are-be (1 word)
  3. busy
  4. confused
  5. dumb
  6. feel
  7. happy
  8. hungry
  9. hurt
  10. mad
  11. mean
  12. nice
  13. pretty
  14. sad
  15. sick
  16. silly
  17. smart
  18. thirsty
  19. tired

Module 11
- Title: Stating and Directing Specific Actions
- Purpose: to use a range of words for specific actions
- Target Vocabulary: 21 words
  1. color
  2. count
  3. dress
  4. drink
  5. eat
  6. hear-listen (2 words/1 picture)
  7. play
  8. read
  9. ride
  10. share
  11. sing
  12. sit
  13. sleep
  14. stand
  15. walk
  16. wax
  17. win-lose (2 words/1 picture)
  18. work
  19. write

Module 12
- Title: Stating Additional Time Concepts
- Purpose: to use specific time words
- Target Vocabulary: 8 words
  1. morning
  2. afternoon
  3. night
  4. before
  5. after
  6. yesterday
  7. today
  8. tomorrow

Direct Teaching of Core
- Through Motor Patterns
- Through Cognitive Learning

Motor Learning
- Motor learning is an important key in the learning and use of any AAC system
- The more cognitively impaired the person, the more he/she depends on motor learning
- It teaches the POWER of communication

Motor Learning comes with...
- Consistency and relative “permanence”
  – Get the same thing with the same movement plan
  – Stable, single sheet systems for core vocabulary
- Meaningful repetition
  – Student-driven learning
  – Fun and functional activities
Motor Learning comes with...

- Accurate practice and repetition - with error restriction and error detection
  - Hand-under-hand guidance
  - Masking and de-activated keys
  - Multi-sensory input and feedback
  - Levels of prompting

Language Instruction

Do Hands-On Activities for Words with Common “Roots” - The “DRINK” Family of Pixons

Teaching Strategies = Masking

- Using MASKING
  - Helps to visually locate words
  - Reduces random selections
  - Requires preplanning to make them

Masking Toolkit

Punching/Cutting Out Holes
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Teaching Strategies = Highlighting
- Foam frames
- Craft stick frames, pointers
- Post-it Note frame
- Adhesive putty/tack

Teaching Strategies – Props & Costumes
Wanted "root"  Negative – "not"

Teaching Word Groups - Strategies
- Visual strategies
  - Color-code
  - Visual spacing between word groups (carrying case)
- Learning and Memory strategies
  - Themed pointers
  - Songs and jingles
  - Humanization metaphors

Humanization of Word Groups
- People (yellow) = Phil Photo (takes your picture)
- Verbs (green) = Herb Verb or Mr. Action Man
- Nouns (orange) = Mother Hubbard
- Adjectives (dark blue) = Art Tist
- Time Adverbs (light blue) = Ed Verb - tells when
- Place Adverbs & Prepositions (purple) = Bob the Builder
- Questions (red) = The Riddler

Costumes for Characters
Verbs – Mr. Action Man  Adjectives – Art Tist

Guidelines for Building Multiple Word Utterances
- Aided Language Stimulation (ALg$) by communication partner
  - Use strategies used with speaking students
  - Work on goals in the Modules
- Visual Strategies (used, not written about in PLLAN)
  - Color-coded building blocks / sentence strings with beads
  - Parts-of-Speech Partner-Pairs
  - Language Building Boards

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Language Construction Strategies
- Write out what they are saying with color coded markers/line drawings
- Use “pull-off” symbols to create a semi-permanent record of the message

Implementation in the Classroom
Teachers Strategies

Make the Core Accessible
Put Charts Around the Room

Make the Core Accessible
Make LOTS of Manual Boards
At Different Stations For ALS and Student Use

Make the Core Accessible
Pixons Descriptive Labels Around the Room as Mini-Displays

See & Take Communication Opportunities
Model & Promote Use of Core
Initiate Communication & Direct Others
Model Many Reasons to Talk (request, comment, etc.)

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Plan to use the Vocabulary During Activities
model language input

- take
- put here
- your turn

Figure out what target core words will be used to replace the nouns in choice making activities – then have then tools to implement your plan.

Include Target Words in Daily Planner

- 8:30 – 9:00 Check home/school books (module 9: Question words)
  - Teacher Model: who, when, where, why, how
  - Have kids ask each other the question words
- 9:00 – 9:30 Morning Circle Time & Daily Schedule
  - Module 12 morning, afternoon, night, before, after, yesterday, today, tomorrow
  - Weather/days from Activity row
- 9:30 – 10:20 Reading/Story time
  - Monday = Mediating Reading (Module 1)
  - Tuesday = Pronouns & People Words (Module 2)
  - Wednesday = Directing Action (Modules 5 & 11)
  - Thursday = Negation (Module 3)
  - Friday = Personal Attributes and Feelings (Modules 6 & 10)

Plan to use the Vocabulary during Non-Instructional Time

Sensory Station

Snack

Use with ALL Students

For Visual Language Input

To Promote Meaningful talking vs. Echolalia

Have SLP Do Focused Intervention

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Bring in Speech Output
50 Location Pixon Board - Whiteboard

Pixons in Devices & Apps
• Pixons will be coming in devices??
• Pixons in apps!
  – Learning Touch App – Dolch Words (reading not AAC app)
  – TapSpeak
  – Satillo - TouchChat

Transition to a Device
• How do I know when it is time to consider using a speech output device?
• What speech output device(s) should be considered?
• How do I help the person make the transition to the device?

Prepare for Transition
• Imported Pixons into device to replace pictures that did not coordinate with Pixons
• Added missing vocabulary to the MAP to ensure had access to currently available vocabulary
• Used Vocabulary Builder/Masking feature of device to “ease in” to the full vocabulary of the program

Transitions for Communication Partners
• Provided visual support materials for the classroom and therapy
  – Wall chart with Unity icon sequences
  – Pixon wall chart – gives “hint” too
• Taught partners how to model on the device
  – Simple “lessons”
  – Visual support materials as “cheat sheets”

Student Transition Teaching Activities
• Compared Pixons to Unity icons
  – Pointed out similarities (root icon, color code, grammatical elements like Mr. Action Man)
  – Located “root” element from Pixon to icon on Unity overlay
• Introduced Sequencing
  – Starting with sequences that START with the icon
  – Then introducing sequences that END with the icon (HARD PART)

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Conclusion

- The Pixon Project Kit is a valuable language development program for children and adults with emerging language skills.
- The Pixon Project Kit materials provided support for transition to the Unity program in Minspeak devices.
- The Pixon Project Kit supported success with the device for not only the student, but the teachers and families as well.

Follow-Up

- Sign-Up for Newsletter
- Make Minspeak Site/Pixon Page a Favorite Place
- Load six 6 CDs onto Hard Drive
- Get Instructions and Put Pixons into Boardmaker
- Get re-sized 50 Legal Board
- Replace 1 Core Board and Resized Extended Boards on Portable Carrying Case Board
- Make Wall Chart (use website version), then Descriptive Labels
- Download instructions for making a PVC frame
- Plan and Practice 1 or 2 Activities with Core (with stuff like “boxes,” carpet, vest, masks, etc.)
- Compile props, costumes, songs, etc.
- Bring Voice Output into the Pixon classroom experience