Getting to the Core: Creating a Core Vocabulary for the Common Core

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Disclosure Statement

Penelope Hatch and Allison Dennis are employees of the University of North Carolina at Chapel Hill. The content of this talk is related to work they are conducting as part of a subcontract awarded to the University by the Dynamic Learning Maps™ project at the University of Kansas. The presentation was developed as part of grant 84.373X100001 from the U.S. Department of Education, Office of Special Education Programs. The views expressed herein are solely those of the authors, and no official endorsement by the U.S. Department of Education should be inferred.
A Challenge and an Opportunity for Students with Complex Communication Needs (CCN)

- The Common Core State Standards
  - US national standards for English Language Arts and Mathematics
  - Focus is on college and career readiness for all students
  - Standards require critical thinking, building a foundation of information, and use of known information to develop new knowledge
The Common Core emphasizes:

- Learning that builds over time.
- Application of knowledge and skills.
- Active participation and interaction in learning activities.
- Collaboration and communication.
- Ongoing comprehensive instruction in reading, writing, speaking, listening, and language.
Our Goals:

- Is not to replace existing systems – We are trying to fill a void.

- Use information to inform current vocabulary selection.
Why might a core vocabulary be useful for students with CCN?
Characteristics of a Core Vocabulary

- Limited set of highly useful words
- Words apply across settings
- Vocabulary is made up primarily of pronouns, verbs, descriptors, and prepositions
- Very few nouns are included in a core vocabulary
- Consistent location of vocabulary
Communication Benefits of a Core Vocabulary

• Variety of word classes included
• Vocabulary allows expression of a variety of communicative functions
• Vocabulary is useful across contexts
• Vocabulary can be combined to increase semantic and syntactic complexity
Core Vocabulary Research Studies

Adults:
• Stuart, Beukelman & King, 1997
• Balandin & Iacono, 1999
• Hill, 2001

Preschoolers:
• Beukelman, Jones, & Rowan, 1989
• Banajee, DiCarlo & Stricklin, 2003
• Trembath, Balandin, & Togher, 2007
• Marvin, Beukelman, & Bilyeu, 1994

None of these studies have examined the language of students in academic settings.
The DLM™ Core Vocabulary Selection Process

- Review of extant core vocabulary research
- Review of several existing core vocabulary sets
- U scores
- Review of vocabulary called out in Common Core
- Development of a weighting system to rank words in order of utility
Academic Core

- Review CCSS and DLM™ Essential Elements to:
  - Determine words specifically called out for expressive use
  - Determine word classes called out for expressive use
  - Determine additional expressive language demands (e.g., describe, clarify, request help)
Academic Core: Specific Words

- Very few of these
- Some examples include:
  - Wh question words
  - Math concepts such as “flat” and “solid”
Academic Core: Word Classes

- Closed-set (e.g., prepositions or pronouns)
- Open-set (e.g., plural nouns, past-tense verbs)
- Expressive Language Demands (e.g., request help, clarify, describe)
Scoring and Weighting the Words

Score each word on the following indices:

– Number of core vocabulary word lists word was included in
– U-score
– Number of closed-sets word addressed
– Number of open-sets and other expressive language demands word addressed

Weight each word on the following indices:

– AAC Scores – range 10 - 230
– U-score - range 3-10
– Open-class or Category Score
Ranking the Words

• Weighted AAC, U-score, and Open-class or category core summed to create priority score
• Priority score indicates utility of the word in supporting expressive communication for students participating in the CCSS or DLM™ Essential Elements
• The higher the priority score, the more utility the word has in addressing the standards.
• 85% overlap between words identified for the DLM™ Core Vocabulary list and existing AAC core lists.
<table>
<thead>
<tr>
<th>Priority Score</th>
<th>AAC Core</th>
<th>Map Node ID</th>
<th>DLM™ EE</th>
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</table>
AAC systems designed to meet the needs of a variety of students

- Core - 12, 9, and 4 locations per page versions
- No matter how many symbols the student has per page, there will be 9 additional pages with an equal number of locations that include core words.
- Systems grow within and across grades.
- As locations are added to the static core, the relative location of previous icons/messages stays the same.
4 x10 Location Core
9 x10 Location Core

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12 x10 Location Core
## DLM’s™ “First 40”

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<td>2.</td>
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<td>different</td>
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</tr>
<tr>
<td>3.</td>
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<td>she</td>
<td>you</td>
<td>he</td>
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<td>is</td>
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<tr>
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<td>don’t</td>
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<td>do</td>
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<td>can</td>
<td>here</td>
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<td>10.</td>
<td>open</td>
<td>turn</td>
<td>stop</td>
<td>over</td>
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</table>
DLM’s™ “First 40”

- Previous slide shows our first 40 suggested words divided into 10 groups of 4 words each.
- The vocabulary selection IS research-based, however, the organization is NOT.
- The groupings of 4 words are one approach to organization.
- Organization was based on providing multiple opportunities for expression as well as receptive input and modeling IF a student needed to start with only 4 symbols at a time.
Using the DLM™ ”First 40” to Inform Vocabulary Selection

• Members from several DLM states have used the “First 40” words when selecting vocabulary to create their own communication overlays.
• SLPs have created core overlays for a variety of communication systems, devices and apps.
32 Location Core Page Created for AssistiveWare’s Proloquo2Go
12 Location Core Overlay Using Mayer-Johnson’s PCS

<table>
<thead>
<tr>
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<tr>
<td>I</td>
<td>like</td>
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<tr>
<td>help</td>
<td>it</td>
<td>more</td>
</tr>
<tr>
<td>who</td>
<td>she</td>
<td>you</td>
</tr>
</tbody>
</table>

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Message Window

Core Words 2

where  up  on  in

me  make  get  look

what  need  are  is

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Message Window

<table>
<thead>
<tr>
<th>some</th>
<th>put</th>
<th>all</th>
<th>this</th>
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<tbody>
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<table>
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<tr>
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## Message Window

Core Words 4

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<td><img src="stop.png" alt="stop" /></td>
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<table>
<thead>
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<th>we</th>
<th>was</th>
<th>did</th>
<th>away</th>
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<th>will</th>
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</tbody>
</table>

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Oakland’s 32 Location Core Vocabulary
Brief History of OS “Core” Pilot:

Observation before core implementation:
– Limited use of communicative functions
– Heavy focus on fringe or expanded core
– Minimal turn takes
– Reduced communicative opportunities

Goal:
– Systematic use of a 32 location core vocabulary set on manual, low tech and high tech systems
Results of Phase 1:

- Increased engagement by SLP’s
- Use of words not easily represented or taught specifically
- Increased expectations for students to use language in flexible ways—more functions
- Focus shifted from the device and programming to language and communication
Teaching and Modeling Vocabulary

• No student will be able to use this approach without teaching and modeling.

• Teaching:
  • Teach the **words** in the set you select.
  • Teach the **symbols** in the set you select.

• Modeling
  • Model the use of the vocabulary during instructional activities and all other communication activities.
  • Receptive input using the system is critical.
  • Create multiple systems and take advantage of peers.
Teaching Vocabulary in 2 Classrooms

2 classrooms for students with ASD using 32 core words for 12 months:

- Manual communication display/Go Talk 32 Express/I pad with Touch Chat app

First they made a plan:

- Choose the new words
- Generate phrases to use new words with known core
- Choose an activity
  - Rich in context
  - Engaging
  - Interactive
Things to Remember

• Our goal is not to replace existing systems – We are trying to fill a void.
• Use information to inform current vocabulary selection.
• You have to add vocabulary for the system to work across all environments (e.g., people, foods, favorite things, what hurts?).
• You must teach and model vocabulary.
To access more information about the DLM™ Core Vocabulary, please visit http://www.med.unc.edu/ahs/clds/resources/core-vocabulary

Thanks!