Classroom-Based Core Vocabulary Instruction for Students With Significant Cognitive Disabilities & Complex Communication Needs

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Disclaimer

• Drs. Karen Erickson, Lori Geist, and Penny Hatch are all full-time employers of the University of North Carolina at Chapel Hill.

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Project Core Overview

• Develop a comprehensive implementation program for the delivery of the multi-tiered system for augmenting language (mSAL).

  - Refine student communication supports
  - Develop implementation tools and training resources for effective use
  - Distribute through Project CORE website
Defining the Need

• Survey representing large sample of students with significant cognitive disabilities \(n=38,038\)

• 23% used aided AAC or sign language
  – 70% of aided AAC users and 84% of sign language users used only single symbols or signs for a restricted range of purposes.

• 9% were reported to have no symbolic system of communication
  – 45% used conventional gestures, 15% used unconventional gestures, 40% used reflexive, rather than intentional behaviors

Erickson & Geist (2016)
Beliefs About Students

All individuals, regardless of the severity of their disability, have the basic right to ongoing instruction that will help them develop versatile communication skills.
Beliefs About Teachers

Teachers have the ability to acquire the knowledge, skills, and dispositions needed to help students with significant cognitive disabilities acquire versatile communication skills using a core vocabulary approach.
Intended Outcomes

1. Improvements in student communication abilities and academic achievement.

2. Increases in frequency and quality of teacher use of Universal Core and other elements of mSAL.

3. Availability of a comprehensive implementation model to support mSAL use.
Multi-Tiered System for Augmenting Language (mSAL)

Tier 1: Universal Core Vocabulary

Tier 2: Specialized

Tier 3: Individualized
Multi-Tiered System for Augmenting Language (mSAL)

• Elements of each Tier:
  • a well-organized AAC system
  • core vocabulary and symbols
  • use of natural everyday environments for teaching
  • models of symbol use by partners
  • ongoing resource support and feedback

Informed by Mary Ann Romski and Rose Sevcik’s System for Augmenting Language (SAL) (1996)
What is Core Vocabulary?

• Limited set of highly useful words.
  • ~85% of spoken language is comprised of 250–350 words

• Vocabulary is primarily pronouns, verbs, descriptors, and prepositions. Very few nouns.
Why Emphasize Core?

• **MANY** opportunities to teach and model each day, all day.

• Useful across settings, topics, purposes and people.

• Specialized and personalized vocabulary provide important, but far fewer opportunities to teach and model (targeted in mSAL at Tier 2 and 3)
Universal Core Vocabulary

• 36 words
• Meaningful as single words
• Can be combined meaningfully
• Useful across environments, activities, and interactions
Universal Core Vocabulary Formats

- **36 location boards**
  - Individual use
  - Classroom use

- **9 location X 4 pages books**

- **4 location x 9 pages books**
  - 4 square (direct select)
  - 4 in-line (partner-assisted scanning)

- **High contrast versions for all**
3D Tactual Symbols from Universal Core

- Represent select core words
- Offer consistency
- Each symbol includes:
  - Unique raised element
  - Printed word
  - Braille
Everyone communicates
Communication Matrix
by Dr. Charity Rowland of Oregon Health & Science University (original 1990, revisions in 1996 and 2004)
www.communicationmatrix.org

- Skills assessment
- Earliest stages of communication
- Any form of communication, with or without symbol use
- Basic reasons to communicate (refuse, obtain, social, information)
Communication Ability Levels

I. Pre-Intentional

II. Intentional Behaviors

III. Unconventional Communication

IV. Conventional Communication

V. Concrete Symbols

VI. Abstract Symbols

VII. Language
Pre-intentional to Intentional
Pre-symbolic to Symbolic Communication
Teaching Principles

• Encourage but do not require communication.

• Have the Universal Core with you and with the student at all times.

• Be patient, provide sufficient time for students to respond, and hold your point.

• Attribute meaning whenever possible.

• Use the Universal Core to model, repeat and expand.
Maximize Opportunities: Daily Routines

- Shared Reading
- Predictable Chart Writing
- Independent Reading
- Independent Writing
- Alphabet Knowledge/Phonological Awareness
- Math
- Specials
- Vocational Ed
- Art
- Music
- Lunch
- Personal Care
- Arrival/Departure
Self-observation Checklists

• Guide teachers’ self-assessment and reflection on use of mSAL and the Universal Core Vocabulary
Planning Support

• Lesson planning

• District decisions about professional development and coaching supports

• Community of practice at www.project-core.com
Professional Development

- Library of self-directed modules
- Materials to facilitate group sessions
Review: Project Goal

• In collaboration with partner schools, develop, evaluate and refine tools for delivery of the multi-tiered system for augmenting language (mSAL).

• Gather data to inform design.
Descriptive Data

Year 1 Review
Professionals \((n=51)\)

On average, participating teachers have several years of experience \((n=16; M=13\text{ years}; SD=8\text{ years})\)

On average, participating teaching assistants are newer to the field \((n=11; M=3.5\text{ years}; SD=2\text{ years})\)
Students \((n=71)\)

**Disability Category**
- Autism: 1
- Developmental Disability: 1
- Hearing Impairment: 1
- Intellectual Disability: 1
- Multiple Disabilities: 11
- Other Health Impairment: 20
- Unknown: 1

**Grade**
- PreK: 16
- Elementary: 32
- Middle: 7
- High School: 16

**Race / Ethnicity**
- American Indian or Alaskan Native: 1
- Asian: 1
- Black or African American: 6
- Hispanic / Latino: 20
- Multiracial: 4
- White: 4
- Unknown: 1

**Gender**
- Male: 26
- Female: 45
Communication Matrix

• Communication Ability Levels (1-7)
• 4 basic reasons for communicating
  – Refusing
  – Obtaining
  – Social connection
  – Providing or seeking information
Change in Average Ability Level

- **Refuse**: Pre = 3.1, Post = 3.46
- **Obtain**: Pre = 3.63, Post = 4.34
- **Social**: Pre = 2.9, Post = 3.7
- **Information**: Pre = 5.53, Post = 5.8

Sample sizes: n = 71 for Refuse and Obtain, n = 15 for Social and Information.

*p = < .05*
## Number of Students At Each Level

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<th>Obtain</th>
<th>Social</th>
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<td>Total</td>
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Classroom Observations: Teacher Behaviors

- Teacher Uses Graphic Symbols
- Teacher Models Core
- Attributes Meaning

* Number in parentheses is the total number of observations.
Classroom Observations: Student Access and Use

* Number in parentheses is the total number of observations
Teachers’ self-assessment: I understand how to use a core vocabulary approach with my students who need AAC. \((n=9)\)
Teachers’ self-assessment: I feel comfortable and confident in my ability to use AAC with my students. 

(n=10)
Development & Dissemination Plan

1. Refine mSAL implementation model (years 2-4)

2. Scale up to 10 Dissemination Schools (year 5)

3. Build a community of practice and distribute all resources through www.project-core.com
www.project-core.com

- Universal Core Vocabulary formats
- 3D tactual symbol files
- 10 Professional Development Modules
  - Self-directed and facilitated formats
  - 4 addition by December
- Instructional Planning Guides & Checklists
- Conference Presentations
- Project Overview
Research Team

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