

Level of Symbolic Communication Classification for Students with Significant Cognitive Disabilities

Diane Browder
Shawnee Wakeman
Claudia Flowers
UNC Charlotte

Levels of Symbolic Communication

- Based on the current work of the National Alternate Assessment Center
www.naacpartners.org @ UNC Charlotte
- Alternate Assessments based on Alternate Achievement Standards
 - Students with significant cognitive disabilities

Legislation

- IDEA '97 required students with disabilities be included in general/district wide assessment programs with alternate assessments conducted beginning July 1, 2000
- NCLB (2002) required states to establish challenging standards and implement assessments that measure students' performance against those standards, and be accountable for achievement

Alternate Achievement Standards

- Regulations permitted states to develop alternate achievement standards for reporting AYP
- Must be aligned with state's academic standards
- Must promote access to the general curriculum
- Must reflect high achievement standards



State Options

- Establish multiple sets of alternate achievement standards
- Multiple entry points for the alternate assessment system

Little known about the practical use of these entry points

- Only a few states exploring this option but this number is growing
 - For example:
 - Pennsylvania: established 3 levels of difficulty based on student performance and the ability for the assessed content areas by grade level
 - North Carolina: will use a decision tree to classify students. Based on that classification, teachers will receive appropriate tasks for students.



Purpose

- Evaluate a classification schema based on symbolic level using examples of how a student might respond to academic instruction

Definitions of Symbolic Levels

- **Awareness:** Has no clear response and no objective in communication
- **Pre-symbolic:** Communicates with gestures, eye gaze, purposeful moving to object, sounds
- **Early Symbolic (concrete):** Beginning to use pictures or other symbols to communicate within a limited vocabulary
- **Symbolic (abstract):** Speaks or has vocabulary of signs, pictures to communicate. Recognizes some sight words, numbers, etc.

Method

□ Participants

- 95 certified teachers of students with significant cognitive disabilities rated 2 students
- Purposeful sampling of teachers enrolled in higher education classes at in the SE USA, as well as teachers in local urban school system
- Identified teachers by type of classroom (e.g., cross categorical, autism, mental disabilities) and level of school (i.e., elementary, middle, high school)

Instrumentation

- Pilot survey
 - 20 teachers who selected their highest and lowest functioning student who participates in AA
 - 2 parts:
 - Part 1 = 28 symbolic indicators adopted from NCDPI material with yes/no options
 - Part 2 = Selection of the most appropriate of the 4 Symbolic levels and definition or “no category” option
 - Content validity and clarity of items, directions, response choices
 - Results:
 - Symbolic indicator stems sometimes unclear, negative stems (e.g., has not yet...) confusing, teachers unsure whether to select on cumulative basis or current functioning.

Items- Part 1

- 10 items with four levels written by first author (e.g., name writing, picture recognition, counting, categorization)
- Items the same for high and low functioning students
- Response options listed in same order for each question (e.g., Awareness, pre-symbolic, early symbolic, symbolic)

Example of Item

- Namewriting (any writing utensil or assistive technology device)
- The student:
 - Only gives fleeting or no attention to task; makes no mark.
 - Attempts to (e.g., movement toward a device or utensil) or makes a mark on a page.
 - Partially writes at least one letter of name/ attempts to write name.
 - Writes first name.

Procedures

- Survey instrument is 5 pages, consisting of close-ended questions
- <10 minutes to complete
- Teachers complete 1 survey on 2 selected students
- Recruitment letter read to teacher by graduate assistant, researcher, or higher ed instructor
- Interested teachers given informed consent letter, survey, and upon completion, a \$10 appreciation gift card

Data Analysis

- Hierarchical cluster analysis to determine how well the symbolic descriptors cluster into the identified symbolic categories
- Descriptive statistics

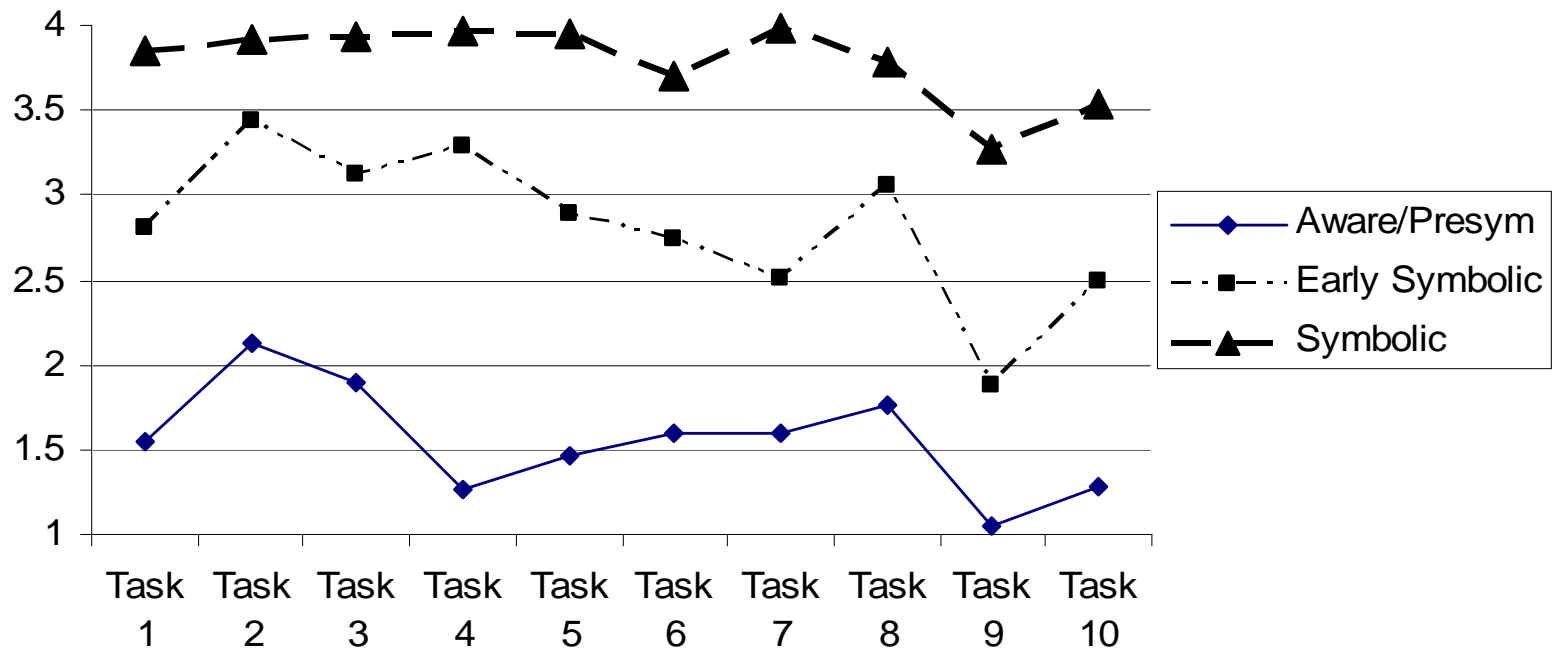
Results- Descriptive

- 189 student ratings
- Results of cluster analysis suggested 4, 3, and 2 cluster solution (based on sharp decrease in proximity coefficient)
- All the cluster solutions had significant difference among the clusters

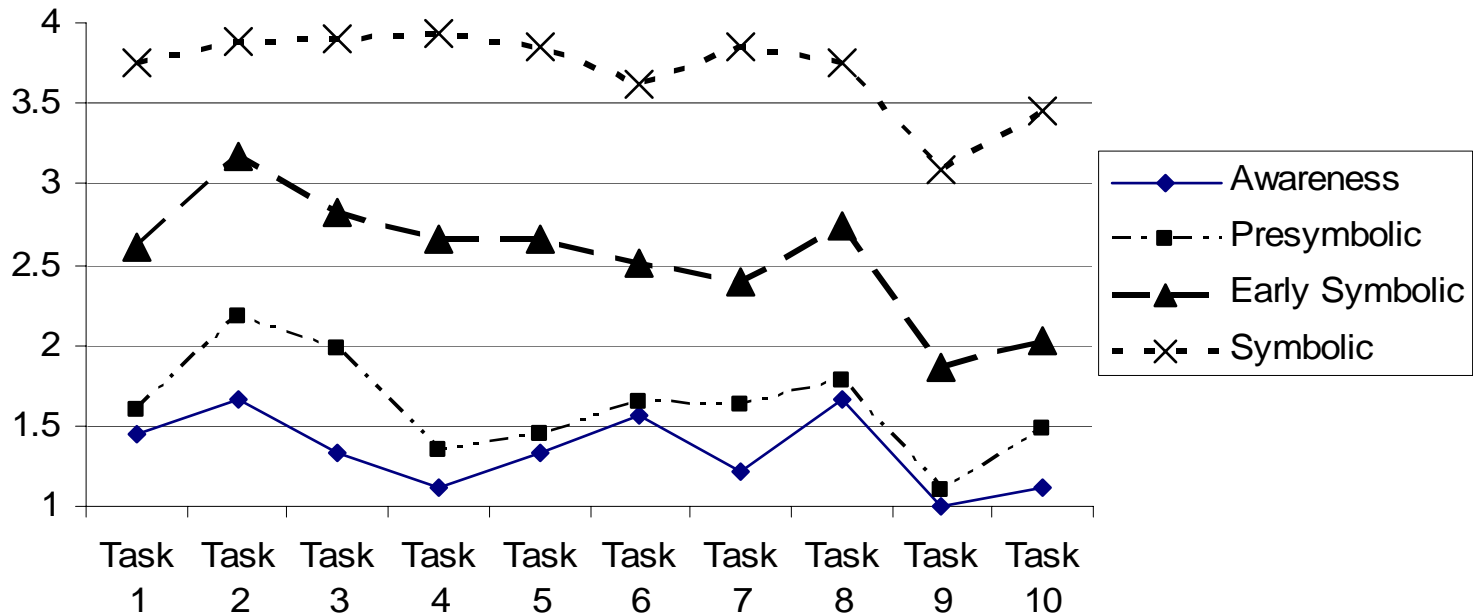
Validation of Cluster Solutions

- Based on agreement indices, the three cluster solution had the highest agreement to the teachers' classification of the student
 - 90% overall agreement & kappa coefficient of .75

Profile of Three Cluster Solution



Our Original Hypothesized Cluster Solution





Discussion

- Results support a classification schema based on symbolic level
- Provides support for having multiple alternate achievement standards



Limitations

- Selection of sample
- Results based on teacher report and not observation



Thank you

- Presentation can be found at <http://education.uncc.edu/access>