

## Validation Studies on the Curriculum Indicators Survey (CIS): *Preliminary Results*

Meagan Karvonen, *Western Carolina University*  
[http://paws.wcu.edu/karvonen/pres\\_home.htm](http://paws.wcu.edu/karvonen/pres_home.htm)

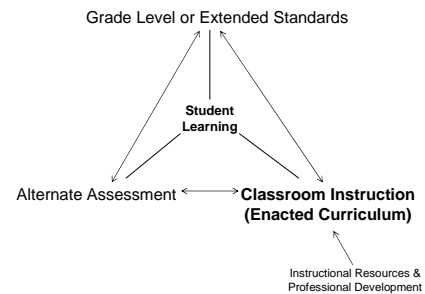
## Validation Studies on the Curriculum Indicators Survey (CIS): Preliminary Results

Co-investigators for this study:  
 Shawnee Wakeman, Claudia Flowers, and Diane Browder  
*National Alternate Assessment Center*

### Overall Project Goals

- Part of National Alternate Assessment Center (funded by U.S. Department of Education, Office of Special Education Programs, No. H324U040001)
- 5-year project:
  - Develop and use alignment methodology with states that have alternate assessments based on alternate achievement standards
  - Intervention studies with teachers, improving alignment of instruction with assessment and standards in order to improve student learning as measured by AA

### Understanding Alignment



### Background and Federal Legislation

- IDEA and NCLB require students with significant cognitive disabilities be taught and assessed in academic subjects; expectations are aligned with grade level content standards but may be extended. Student performance judged based on alternate achievement standards
- Difficulty in creating general curriculum access for the population
  - Prerequisite skills
  - Idea of grade level link
  - Limited research base for academic instruction strategies
  - Special educators' limited understanding/acceptance of general education academics
  - Academic instruction for NCLB vs. curricular priorities in IEP

### Curriculum Indicators Survey (CIS)

- Designed to measure the enacted curriculum for students with significant cognitive disabilities
  - English language arts, math, science
- Teacher self-report measures
  - Responses based on curriculum for a single target student during current school year
- Used at state level in alignment studies and with teachers for self-assessment in the context of professional development
- Long form: fine grain size for detailed information
- Short form: coarse grain size with reduced response burden

## Sample CIS Items

Item	Description	DOK	Intensity of Coverage Indicate how often you plan to use this item				Highest Performance Expectations				Grade Level			
			0	1	2	3	4	5	A	MB		A	2/3	4/5
1200	Integrated Comprehension		0	1	2	3	4	5	A	MB	A	2/3	4/5	B
1201	Reason in Math Arguments		0	1	2	3	4	5	A	MB	A	2/3	4/5	B
1202	Reason for General/Individual Observations		0	1	2	3	4	5	A	MB	A	2/3	4/5	B

For each content area:

- Intensity of coverage (# of lessons within a year)
- Highest performance expectation (depth of knowledge)
- Grade level(s) from which materials, activities, and contexts were adapted

## Initial CIS Development: Issues

- Expert review: content was comprehensive; conceptualization consistent with original SEC measures
- Pilot testing:
  - Instructions, formatting clear
  - Minor issues with wording of specific items
  - Relevant for population
- Response burden for long form
- Teachers “stretching” academic content
- *Skepticism among researchers about teacher self-report measures of instruction*

## Purpose of Presentation

Describe preliminary findings from two validation studies:

1. Criterion measures
2. Cognitive interviews

## Study 1: Criterion Measures

- 7 teachers participated in 3-month study
- Daily Instruction Surveys (DIS)
  - Randomly selected days, ~ 20% of instructional days during study period
  - Content of academic instruction
  - Performance expectation
  - Info about instructional delivery
- Day-long observation
  - Items paralleling DIS
  - Narrative of teacher-student interactions during each academic lesson; coded for content and DOK
- Comparison with intensity, DOK reported by teachers on CIS

## CIS vs. Daily Instruction Surveys

	ELA		Math		Science	
	n	%	n	%	n	%
Lesson topics identified in DIS	38		31		27	
Topics with CIS match	24	63.2	24	77.4	24	88.9
Total CIS matches	37		38*		34	
Depth of Knowledge						
Exact match	19	51.4	17	44.7	31	91.2
CIS > DIS	13	35.1	10	26.3	2	5.9
CIS < DIS	5	13.5	10	26.3	1	2.9

## CIS vs. Observation

	ELA		Math		Science	
	n	%	n	%	n	%
Number of lessons	20		8		8	
Total topics within lessons	58		21		10	
Topics with CIS match	50	86.2	19	90.5	10	100
Depth of Knowledge						
Exact match	22	44.0	4	21.1	4	40.0
CIS > Obs	18	36.0	6	31.6	2	20.0
CIS < Obs	10	20.0	9	47.4	4	40.0

## Study 2: Cognitive Interviews

- Five teachers
  - Current responsibility for alternate assessments
  - 4 elementary, 1 HS from 4 districts; variety of student types
  - think aloud interviews with in vivo probes
  - semi-structured debriefing interview questions
  - Completed 2 ELA, 2 math, 1 science (also two partial ELAs)

## Study 2: Findings

### Intensity

- evidence for accurate differentiation in the intensity of instruction for concepts within a strand
- comparisons about the *relative* emphases between similar items

### DOK

- accurate understandings of the levels in the scale and what the students were expected to do
- using the example verbs provided for each DOK level

## Study 2: Findings

Potential problem areas re: content

- Overlap among similar items
  - “story elements” and “characters in text”
- Extension
  - Time = waiting patiently
- Content viewed as inaccessible
  - Teachers’ own limitations
  - Limited understanding about how to adapt “newer” content areas
  - Judged to be inappropriate based on student’s disability / communication mode

## Study 3: Long and Short Forms

- Data collection still in progress
  - (reported here based on n = 11 teachers from two states)
- Counterbalanced design
- 2-week interval
- Agreement @ strand level

## Study 3: Results (Math only)

Math Strands	Strand Agreement	DOK Correlations
Numbers & Operations	100%	.69
Patterns, Relations, and Algebra	91%	.74
Measurement	91%	.79
Geometry	91%	.93
Data Analysis/Statistics/Probability	45%	N/A

## Implications and Next Steps

- Reasonable content match (especially math & science)
  - Need to investigate reasons for mismatch (e.g., teacher familiarity with certain subjects; level of specificity within strand targeted vs. whole group instruction)
- DOK match lower, for several potential reasons
  - Mid-year vs. end of year expectations
  - Need to shift gears due to student absences
  - May reflect higher expectations vs. stagnation

### **Implications and Next Steps**

- Using data sources across studies to help interpret findings
  - Cognitive interviews → understand content mismatches by criterion study participants
- Practitioners: addressing inaccessibility of content
  - Professional development targeting underutilized domains, adaptations
  - Convincing teachers about possibilities vs. limitations (and relevance of academics)