

STATE DEPARTMENT OF EDUCATION'S
CURRICULUM INDICATORS SURVEY (CIS) RESULTS

UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE
NATIONAL ALTERNATE ASSESSMENT CENTER

AUGUST 27, 2007

TABLE OF CONTENTS

Introduction and methodology.....	3
Short version: Results.....	5
Short version: Appendix tables.....	25
Long version: Results	43
Long version: Appendix tables	48

CURRICULUM INDICATORS SURVEY (CIS) RESULTS

The Curriculum Indicators Survey (CIS) was administered as part of the alignment study on the Alternate State School Assessment (alternate assessment) conducted by the University of North Carolina at Charlotte under the auspices of the National Alternate Assessment Center in spring 2007. This report summarizes the methodology and findings from the CIS administration. In addition, information is provided about the alignment of the enacted curriculum, as reported by teachers, with the emphases in the alternate assessment.

Methodology

The CIS is a five-part survey designed to measure, through teacher self-report, the enacted academic curriculum in English language arts (ELA), math, and science, for students with significant cognitive disabilities who are eligible to take a state's alternate assessment based on alternate achievement standards. The CIS is based on the concepts in the Surveys of Enacted Curriculum but is adapted for the unique needs of this population of teachers and students.

- Part 1 asks for background information on the teacher (e.g., educational experience, characteristics of case load, and instructional influences in each academic subject).
- In Part 2, teachers provide information about the types of students on their case load, based on students' levels of symbolic communication. They are then asked to select a single student on their case load who will serve as the "target student" for the remaining three parts of the survey.
- Parts 3-5 measure the English language arts, math, and science curriculum being taught to the target student during the current academic year. For each academic skill taught, teachers rate three pieces of information: (1) the intensity of coverage of the topic, (2) the highest performance expectation (depth of knowledge, or DOK) of the student on the topic, and (3) the grade level or band from which activities, materials, and contexts were adapted for instruction on that skill. There are also a few questions in Parts 3-5 about the types of instructional methods used to teach the academic content.

In this alignment study, both the long and short versions of the CIS were administered. As an incentive, respondents who completed all five sections were entered into a drawing to receive one of ten \$50 gift cards.

Short Version

Teachers were invited to complete the short version online in May 2007. Eligible teachers were identified by State Department of Education, Division of Assessment and Accountability. Teachers were recruited via email sent directly by the State DOE. The State DOE sent email invitations to 4,355 email addresses. A follow-up email was sent to six teachers who had completed parts of the survey, but not the entire survey, five days before the deadline.

Through email and phone correspondence with potential short version participants, it became clear that some teachers originally on the recruitment list were not eligible, while some emails were sent to principals who then distributed the notice to teachers whose names were not on the original list. A precise response rate cannot be determined because of the recruitment methods used. Because not all teachers completed all sections, sample sizes for each section are reported with the corresponding results.

CIS topics were reviewed by content experts to determine the match between survey topics and State's content standards (Voluntary State Curriculum and High School Core Learning Goal topics). These identified matches were used to analyze the alignment of the enacted curriculum as reported by teachers with the alternate assessment.

Long Version

The long versions for Parts 3-5 were completed by alternate assessment facilitators during a professional development meeting held in early June, 2007. Whereas teachers completed the short version with a selected target student in mind, facilitators completed the surveys based on the academic instruction provided by the "typical" teacher they worked with in 2006-07. They were then asked to review the content not taught by the typical teacher and indicate whether the "best" teacher they worked with in 2006-07 had taught that content.

Organization of the Findings

CIS short version results are organized into two sections: (a) respondents' backgrounds and (b) the enacted (taught) curriculum. Within the second section, results are reported for each subject (English language arts, math, and science). Alignment of instructional emphases with emphases in the Alternate assessment assessments are made for ELA and math only, since no alternate assessment in science was administered in 2007. An appendix contains supplemental tables.

Long version results are reported separately, following the short version results. These findings provide a fine-grained analysis of the instructional priorities for students who took alternate assessments in 2007. However, as the responses allow for inferences at the teacher level rather than student level, results are purely descriptive and intended for professional development planning. Analysis was not conducted on alignment of the CIS long version results with alternate assessment content.

CIS Results: Short Version

Section 1: Respondents' Backgrounds

A total of 55 teachers, including 50 (91%) females and 5 (9%) males completed Part 1 of the CIS. The majority (69%) held Masters degrees, while 27% had Bachelors degrees and two respondents (4%) had a six-year degree. Distributions of years of teaching experience are summarized in the table below.

Percent of Respondents Reporting Years of Teaching Experience

Years of experience	Total Teaching	Teaching students with sig. cog. disabilities	Teaching ELA	Teaching Math	Teaching Science
0-10	40.0	45.5	50.9	54.5	67.3
11-20	30.9	30.9	27.3	25.5	30.9
21 or more	29.1	23.6	11.8	20.0	10.9

While fewer than one-fifth (18.2%) of teachers had three or less years of total teaching experience and years of teaching students with significant cognitive disabilities, that figure was higher for English language arts and math (27.3% each), and for science (41.8%). Relatively few respondents held licensure in the academic subjects (13% in ELA, 3.8% in math, 7.5% in science). All but one respondent (98.2%) held certification in special education, and 32.7% were certified in elementary education. Fewer respondents had middle or secondary licensure or National Board certification (9.1% each).

Teachers were also asked to report the amount of time in the past year that they had spent in professional development on content standards and instructional strategies in each of the three academic subjects. Response distributions are shown below. The most widely reported professional development experiences were in ELA instructional strategies, followed by ELA content standards, math content standards and instructional strategies. Approximately one-fourth of respondents reported receiving any professional development in science within the previous year.

Time Spent in Professional Development in Past 12 Months

	none	1-5 hours	6-10 hours	11-15 hours	> 15 hours
Instructional strategies in teaching ELA	34.5	25.5	12.7	12.7	14.5
ELA content standards	41.8	29.1	14.5	5.5	9.1
Instructional strategies in teaching math	56.4	27.3	7.3	3.6	5.5
Math content standards	60.0	27.3	5.5	1.8	5.5
Instructional strategies in teaching science	80.0	7.3	7.3	5.5	0
Science content standards	76.4	16.4	5.5	1.8	0

Section 2: Academics

Teachers completed surveys on the enacted curriculum for their students in English language arts (ELA), math, and science. Fifty-six teachers completed Part 2 of the survey, in which the target student was identified for Parts 3-5. Of the target students selected, 39% were enrolled in elementary grades, 34% in middle grades, and 27% in high school. (One student reportedly had no assigned grade.)

In order to understand the characteristics of the learners selected as target students, respondents were asked to identify which of the three levels of communication best reflected what the student could currently do.

Level 1 (awareness/presymbolic): Has not yet acquired the skills to discriminate between pictures or other symbols (and does not use symbols to communicate). May or may not use objects to communicate. May or may not use idiosyncratic gestures, sounds/vocalizations, and movements/touch to communicate with others. A direct and immediate relationship between a routine activity and the student’s response may or may not be apparent. The student may have the capacity to sort very different objects, may be trial and error. Mouthing and manipulation of objects leads to knowledge of how objects are used. May combine objects (e.g., place one block on another).

Level 2 (early symbolic): May use some symbols to communicate (e.g., pictures, logos, objects). Beginning to acquire symbols as part of a communication system. May have limited emerging functional academic skills. Representations probably need to be related to the student’s immediate environment and needs.

Level 3 (symbolic): Communicates with symbols (e.g., pictures) or words (e.g., spoken words, assistive technology, ASL, home signs). May have emerging or basic functional academic skills. Emerging writing or graphic representation for the purpose of conveying meaning through writing, drawing, or computer keying.

The majority of teachers identified target students who had symbolic communication. While three target students were reported to be enrolled in grades pK-2, these responses were not excluded from the descriptive portions of this report due to the small sample size and the possibility of a clerical error (i.e., a student labeled pK-2 but of the chronological age to be enrolled in alternate assessment-eligible grades).

Communication Levels of Identified Target Students, by Enrolled Grade Band

Assigned grade band	Level 1	Level 2	Level 3	Total
pK-2	1	1	1	3
3-4	1	3	8	12
5-6	2		9	11
7-8	1	4	10	15
9-10	4	1	9	14
Total	9	9	37	55

While disability labels are not precise classifications in terms of students' levels of functioning, teachers were asked to provide this information about their target students for descriptive purposes. The most frequently reported categories were mental retardation, multiple disabilities, autism, and speech/language impairment. None of the respondents selected target students with deaf-blindness, traumatic brain injury, or serious emotional disturbance.

Disability Labels of Target Students (N = 56)

IDEA Disability Label	% of Target Students
Mental Retardation	67.9
Multiple Disabilities	30.4
Autism	28.6
Speech / Language Impairment	23.2
Other Health Impairment	12.5
Orthopedic Impairment	10.7
Visual Impairment	7.1
Specific Learning Disability	1.8
Hearing Impairment	1.8

Thus, in general, the target students on whom the remaining descriptions of enacted curriculum are based are fairly evenly split among elementary, middle, and secondary grades. They primarily have early symbolic or symbolic communication systems, while nearly one-third have multiple disabilities. The State Department of Education should consider the remaining results in light of this profile of the target students, in terms of overall representativeness of students who take alternate assessment.

ENGLISH LANGUAGE ARTS

A total of 50 teachers completed the English language arts (ELA) section of the CIS, which includes both reading and writing. This section of the report summarizes teacher responses to the ELA section as well as ELA-related items from Part I of the survey (general background).

ELA Content

The table below provides an overview of the distributions of depth of knowledge (DOK) expected of target students for items within each of the four ELA topics. Frequencies represent the number of items, across target students, for whom the content was taught in 2006-07. Distributions of DOK expectations for each item within each topic are reported in Table E.1 in the appendix.

Distribution of ELA Content Taught, by Depth of Knowledge

Topic	N	Attention		Memorize/ Recall		Perform		Comprehend		Apply		Analyze/ Synthesize/ Evaluate	
		n	%	n	%	n	%	n	%	n	%	n	%
Language	237	52	21.9	51	21.5	64	27.0	27	11.4	37	15.6	6	2.5
Reading and Literature	433	128	29.6	122	28.2	93	21.5	43	9.9	39	9.0	8	1.8
Composition	193	32	16.6	50	25.9	70	36.3	20	10.4	19	9.8	2	1.0
Media	48	22	45.8	15	31.3	4	8.3	2	4.2	5	10.4	0	0.0

The most frequently taught ELA topic was Reading and Literature. Forty-three percent of the responses within this topic came from items related to beginning reading, understanding texts, fiction, and nonfiction (see Table E.1). Language and Composition were the other two most frequently reported ELA topics included in the enacted curriculum for target students in 2006-07. The highest performance expectations for the target students in the current academic year tended to be on attending to the content, memorizing or recalling the content, or performing rote tasks related to the content. Very few of the target students were expected to analyze, synthesize, or evaluate material.

Grade Level Materials, Activities, and Contexts

After identifying each type of ELA content and DOK at which the target students were taught, teachers were also asked to identify the grade band or grade from which activities, materials, and contexts were adapted to teach the corresponding ELA content. The table below summarizes the distribution of responses to items within each ELA topic. (Respondents could identify more than one grade band if applicable to the target student.)

The majority of ELA materials were adapted from elementary grades, either pK-2 or 3-5.

Percent of CIS items taught to target student with materials, activities, contexts in each grade band

	pK-2			3-5		6-8		9-12		No grade band		Specific grade	
	N	n	%	n	%	n	%	n	%	n	%	n	%
Language	280	92	32.9	66	23.6	40	14.3	16	5.7	52	18.6	14	5.0
Reading and Literature	488	143	29.3	144	29.5	113	23.2	43	8.8	37	7.6	8	1.6
Composition	222	70	31.5	62	27.9	48	21.6	17	7.7	25	11.3	0	0.0
Media	59	19	32.2	13	22.0	11	18.6	4	6.8	11	18.6	1	1.7

Other ELA Instruction Information

Tables E.2 – E.5 in the appendix provide additional results related to ELA instruction. Highlights of these findings are as follows:

- **Instructional activities:** The most frequently reported instructional methods used recently with the target students in ELA were scaffolded instruction with supports, individualized instruction, the use of manipulatives, and small group instruction. The highest rate of expected independent, active performance within a lesson was seen in using computers or assistive technology. Otherwise, fewer than one-fifth of respondents expected the target student to perform independently in other ELA instructional activities. Instead, they included some level of support or limited participation within the activity.
- **Resources:** Teachers reported using a wide range of materials to teach students who take the Alternate assessment, including materials adapted from general education, teacher-made materials, and age-appropriate materials designed for students with significant disabilities. Nearly three-fourths (73%) also reported using assistive technologies. Most respondents also reported using functional materials (78%) and other school settings (67%), although only 38% said their students received ELA instruction in inclusive settings. The majority of teachers reported enlisting support from other special education teachers (51%) and therapeutic support staff (73%) to assist with ELA instruction.
- **Instructional influences:** The strongest influences on teachers' choices about ELA instruction are student needs as documented in IEPs (96% moderate to strong influence), classroom assessment results (91% moderate to strong influence), and alternate assessment requirements (89% moderate to strong influence). Lesser influences included national ELA standards (61% minimal to no influence), and prior alternate assessment results (38% minimal to no influence).
- **Classroom assessment:** For the purpose of assessing their students in ELA, teachers reported using observational data most frequently (80% once per week or more frequently), followed by performance on-demand (76% once per week or more often), and objective tests (65% weekly or more often) for assessment purposes.

Instructional Alignment

To investigate the alignment of the enacted ELA curriculum with the emphases in the alternate assessment, CIS responses and alignment expert codes were both linked back to Voluntary State Curriculum (VSC) and High School Core Learning Goal (CLG) topics. The distributions of CIS items endorsed within each topic and each DOK level were converted to proportions based on the total number of items endorsed within the topics. While some CIS items may have included content related to multiple VSCs, only the *best* match was selected.

Proportional coverage on the alternate assessment topics was determined by examining content experts' ratings of those items during the spring 2007 alignment study. After VSC/CLG topic matches for each CIS item were identified, comparisons of topic x DOK proportions in the CIS responses and alternate assessment ratings were made.

Grades 3-8

The correspondence between CIS topics and State's VSC topics in ELA are shown below. All but three CIS items matched one of the State VSC topics, and two VSC topics (Fluency and Listening) had no CIS links.

CIS Topic	VSC Topic
Discussion	7.1
Questioning, Listening, Contributing	7.1
Oral Presentation	7.1
Vocabulary & Concept Development	1.3
Structure and Origins of Modern English	5.1
Formal and Informal English	7.1
Beginning Reading	1.1
Understanding Text	1.4
Making Connections	3.1
Genre	3.1
Theme	3.1
Fiction	3.1
Nonfiction	2.1
Poetry	3.1
Style and Language	3.1
Myth, Traditional Narrative, and Classical Literature	3.1
Dramatic Literature	3.1
Dramatic Reading and Performance	7.1
Writing	4.1
Consideration of Audience and Purpose	4.1
Revising	4.1
Standard English Conventions	5.1
Organizing Ideas in Writing	4.1
Research	4.1
Evaluating Writing and Presentations	None
Analysis of Media	None
Media Production	None

The following table reflects proportional coverage of CIS ELA items identified as being aligned with VSC Topics.

CIS Emphases, Grades 3-8 (N = 576 item endorsements, 38 respondents)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1.1 Phonics	0.005	0.005	0.021	0.002	0.016	0.003
1.2 Fluency	*	*	*	*	*	*
1.3 Vocabulary	0.007	0.016	0.009	0.010	0.01	0.002
1.4 Comprehension	0.01	0.012	0.012	0.009	0.012	0
2.1 Comprehension of Informational Text	0.01	0.014	0.014	0.007	0.009	0
3.1 Comprehension of Literary Text	0.095	0.115	0.063	0.036	0.007	0.002
4.1 Writing	0.033	0.056	0.052	0.016	0.014	0
5.1 Controlling language	0.01	0.019	0.031	0.007	0.016	0.002
6.1 Listening	*	*	*	*	*	*
7.1 Speaking	0.049	0.043	0.063	0.014	0.04	0.003

* N/A – no match to content standards

The table below shows the proportional content x DOK coverage of alternate assessment Reading assessments in the alignment study sample. None of the portfolios had ELA items identified at the attention level of DOK, or in the topics of writing, controlling language, listening, or speaking.

Alternate assessment Emphases (N = 1,551)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1.1 Phonics		0.005	0.006	0.001	0.001	
1.2 Fluency		0.132	0.006	0.063	0.002	0.003
1.3 Vocabulary		0.148	0.010	0.047	0.005	0.032
1.4 Comprehension		0.035	0.003	0.009	0.002	0.010
2.1 Comprehension of Informational Text		0.187	0.001	0.027	0.015	0.001
3.1 Comprehension of Literary Text		0.221	0.001	0.027	0.001	0.001
4.1 Writing						
5.1 Controlling language						
6.1 Listening						
7.1 Speaking						

On the whole, teacher-reported curriculum emphases covered a broader range of content and DOK than what was emphasized in the alternate assessment. There were 3 of 45 cells with no coverage on the CIS ELA items, and 31 of 60 with no coverage on the alternate assessment.

The CIS and alternate assessment matrices were then compared cell by cell to identify areas of consistency and discrepancy between the enacted curriculum reported by teachers in 2006-07 and the emphases in the alternate assessment Reading content in the sampled portfolios. The table below summarizes this comparison. Small discrepancies exist within the Phonics and Comprehension topics. CIS responses showed lesser emphases at the memorize/recall level, especially in Vocabulary, Comprehension of Informational Text, and Comprehension of Literary Text, as indicated by negative numbers. The alternate assessment places less emphasis on Comprehension of Literary Text at the attention and performance levels of knowledge compared with teachers' instructional reports.

Boxes around cells are used to highlight places where the proportional discrepancies were greater than 0.05 (essentially, more than five percentage points). Topics below the dark line are those not intended to be measured by the alternate assessment in Reading.

Discrepancy between CIS and Alternate Assessment Emphases (CIS – AA)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1.1 Phonics	0.005	0.000	0.015	0.000	0.015	0.003
1.2 Fluency	0.000	-0.132	-0.006	-0.063	-0.002	-0.003
1.3 Vocabulary	0.007	-0.132	-0.001	-0.037	0.006	-0.030
1.4 Comprehension	0.010	-0.023	0.009	0.000	0.010	-0.010
2.1 Comprehension of Informational Text	0.010	-0.173	0.013	-0.020	-0.007	-0.001
3.1 Comprehension of Literary Text	0.095	-0.107	0.062	0.009	0.006	0.000
4.1 Writing	0.033	0.056	0.052	0.016	0.014	0.000
5.1 Controlling language	0.010	0.019	0.031	0.007	0.016	0.002
6.1 Listening						
7.1 Speaking	0.049	0.043	0.063	0.014	0.040	0.003

Blank cells indicate no coverage in either CIS or Alternate Assessment.

High School

The correspondence between CIS topics and State's CLG topics in ELA are shown below. All but five CIS items matched one of the State CLG topics.

CIS Topic	CLG Topic
Discussion	3
Questioning, Listening, Contributing	3
Oral Presentation	3
Vocabulary & Concept Development	1
Structure and Origins of Modern English	None
Formal and Informal English	3
Beginning Reading	None
Understanding Text	1
Making Connections	1
Genre	1
Theme	1

CIS Topic	CLG Topic
Fiction	1
Nonfiction	1
Poetry	1
Style and Language	1
Myth, Traditional Narrative, and Classical Literature	1
Dramatic Literature	3
Dramatic Reading and Performance	3
Writing	2
Consideration of Audience and Purpose	2
Revising	2
Standard English Conventions	3
Organizing Ideas in Writing	2
Research	None
Evaluating Writing and Presentations	4
Analysis of Media	None
Media Production	None

The following table reflects proportional coverage of CIS ELA items identified as being aligned with CLG Topics.

CIS Emphases, High School (N = 197 item endorsements; 14 respondents)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1. Reading, review, and responding to texts	0.162	0.112	0.086	0.056	0.061	0.015
2. Composing in a variety of modes	0.030	0.020	0.066	0.041	0.005	0.005
3. Controlling language	0.086	0.046	0.107	0.036	0.010	0.025
4. Evaluating content, organization, and language use of texts	0.010	0.005	0.015			

The table below shows the proportional content by DOK coverage of Reading alternate assessments in the alignment study sample. None of the portfolios had evidence identified at the attention level of DOK, or in the topics of Controlling Language or Evaluating Content, Organization, and Language Use of Texts. On the whole, teacher-reported curriculum emphases covered a broader range of content and DOK than what was emphasized in the alternate assessment.

Alternate assessment Emphases (N = 266)

	Attention	Memorize/ Recall	Perform	Compre- hend	Apply	Analyze/ Synthesize / Evaluate
1. Reading, review, and responding to texts		0.692	0.045	0.128	0.071	0.041
2. Composing in a variety of modes		0.015	0.004			0.004
3. Controlling language						
4. Evaluating content, organization, and language use of texts						

The CIS and alternate assessment matrices were then compared cell by cell to identify areas of consistency and discrepancy between the enacted curriculum reported by teachers in 2006-07 and the emphases in the alternate assessment Reading content in the sampled portfolios. The table below summarizes this comparison. Small discrepancies exist within the Composing topic. CIS responses showed lesser emphases in the Reading, Reviewing, and Responding to Texts topic at the memorize/recall and comprehension levels, but greater emphasis on that topic at the attention level, as indicated by negative numbers.

Boxes around cells are used to highlight places where the proportional discrepancies were greater than 0.05. Topics below the dark line are those not intended to be measured at the high school level by the alternate assessment in Reading.

Discrepancy between CIS and Alternate Assessment Reading Emphases (CIS – AA)

	Attention	Mem/Rec	Perform	Compre- hend	Apply	Analyze/ Synthesize/ Evaluate
1. Reading, review, and responding to texts	0.162	-0.580	0.041	-0.072	-0.011	-0.026
2. Composing in a variety of modes	0.030	0.005	0.062	0.041	0.005	0.001
3. Controlling language	0.086	0.046	0.107	0.036	0.010	0.025
4. Evaluating content, organization, and language use of texts	0.010	0.005	0.015			

Blank cells indicate no coverage in either CIS or Alternate Assessment.

MATHEMATICS

A total of 47 teachers completed the math section of the CIS. This section summarizes teacher responses to the math section as well as math-related items from Part I of the survey (general background).

Math Content

The table below provides an overview of the distributions of depth of knowledge (DOK) expected of target students for items within each of the five math topics. Frequencies represent the number of items, across target students, for whom the content was taught in 2006-07. Distributions of DOK expectations for each item within each topic are reported in Table M.1 in the appendix.

Distribution of Math Content Taught, by Depth of Knowledge

Topic	N	Attention		Memorize/ Recall		Perform		Comprehend		Apply		Analyze/ Synthesize/ Evaluate	
		n	%	n	%	n	%	n	%	n	%	n	%
Number Sense and Operations	116	20	17.2	14	12.1	34	29.3	15	12.9	28	24.1	5	4.3
Patterns, Relations, and Algebra	121	35	28.9	19	15.7	33	27.3	11	9.1	20	16.5	3	2.5
Geometry	128	33	25.8	24	18.8	38	29.7	15	11.7	13	10.2	5	3.9
Measurement	111	35	31.5	16	14.4	27	24.3	11	9.9	19	17.1	3	2.7
Data Analysis, Statistics, and Probability	67	25	37.3	13	19.4	15	22.4	7	10.4	2	3.0	5	7.5

The most frequently taught math topic was Geometry. Roughly one-third of the responses within this category came from the item related to characteristics of geometric shapes (see Table M.1). Patterns, Relations, and Algebra; and Number Sense and Operations were the other two most frequently reported math topics included in the enacted curriculum for target students in 2006-07. The highest performance expectations for the target students in the current academic year tended to be on attending to the content, memorizing or recalling the content, or performing rote tasks related to the content. Roughly one-third of expectations were at higher levels of cognitive demand (comprehension and application) in Number Sense and Operations, and one-fourth were at higher levels in Patterns, Relations, and Algebra; Geometry; and Measurement. Very few students were expected to analyze, synthesize, or evaluate material.

Grade Level Materials, Activities, and Contexts

After identifying each type of math content and DOK at which the target students were taught, teachers were also asked to identify the grade band or grade from which activities, materials, and contexts were adapted to teach the corresponding math content. The table below summarizes the distribution of responses to items within each math topic. (Respondents could identify more than one grade band if applicable to the target student.)

The majority of math materials were adapted from elementary grades, either preK-2 or 3-5. Between 10% and 15% of items were taught with materials and activities that were not unique to a specific grade band.

Percent of CIS items taught to target student with materials, activities, contexts in each grade band

	pK-2			3-5		6-8		9-12		No grade band		Specific grade	
	N	n	%	n	%	n	%	n	%	n	%	n	%
Number Sense and Operations	135	64	47.4	41	30.4	13	9.6	4	3.0	13	9.6	0	0.0
Patterns, Relations, and Algebra	146	63	43.2	47	32.2	12	8.2	9	6.2	14	9.6	1	0.7
Geometry	154	71	46.1	44	28.6	17	11.0	6	3.9	16	10.4	0	0.0
Measurement	131	58	44.3	36	27.5	15	11.5	4	3.1	16	12.2	2	1.5
Data Analysis, Statistics, and Probability	80	33	41.3	23	28.8	7	8.8	5	6.3	12	15.0	0	0.0

Other Math Instruction Information

Tables M.2 – M.5 in the appendix provide additional results related to math instruction. Highlights of these findings are as follows:

- **Instructional activities:** The most frequently reported instructional methods used recently with the target students in math were small or large group instruction and the use of manipulatives to solve problems, followed by individualized instruction. The highest rates of expected independent, active performance within a lesson were seen in using computers or calculators, independent work, and rote counting. Otherwise, the expectation for the target student tended to include some level of support or limited participation rather than independent performance of skills within the activity.
- **Resources:** Teachers most often reported using teacher-made materials or commercially prepared materials adapted from general education in order to teach math lessons. The vast majority used functional, real-life materials, although fewer than half taught math concepts in inclusive classrooms. Fewer than half of teachers reported enlisting support from other special education teachers and therapeutic support staff to assist with math instruction, or adopting activities and materials used by general educators in their school. Roughly one-fourth reported enlisting support from non-disabled peers.
- **Instructional influences:** The strongest influences on teachers’ choices about math instruction are student needs as documented in IEPs (96% moderate or strong influence), classroom assessment results (87% moderate to strong influence), and alternate assessment requirements (86% moderate to strong influence). Less endorsed items included national math standards (38% moderate to strong influence), and math content, materials, and activities used by general education teachers in the school (44% moderate or strong influence).
- **Classroom assessment:** For the purpose of assessing their students who take the alternate assessment in Mathematics, teachers reported using observational data most frequently (84% once per week or more frequently), followed by performance on-demand (73% once per week or more often). Approximately half (53%) reported frequent use of objective tests for assessment purposes.

Instructional Alignment

To investigate the alignment of the enacted ELA curriculum with the emphases in the alternate assessment, CIS responses and alignment expert codes were both linked back to VSC /CLG topics. The distributions of CIS items endorsed within each topic and each DOK level were converted to proportions based on the total number of items endorsed within the topics. While some CIS items may have included content related to multiple VSCs, only the *best* match was selected.

Proportional coverage on the alternate assessment topics was determined by examining content experts' ratings of those items during the spring 2007 alignment study. After VSC/CLG topic matches for each CIS item were identified, comparisons of topic by DOK proportions in the CIS responses and alternate assessment ratings were made.

Grades 3-8

The correspondence between CIS topics and State's Math VSC topics are shown below. All CIS items matched one of the State VSC topics, and one VSC topic (Process of Mathematics) had no direct CIS links.

CIS Topic	VSC Topic
Number Sense	6
Operations	6
Computation and Estimation	6
Patterns, relations, and functions	1
Algebra	1
Relations and mathematical models	1
Variables and change	1
Characteristics of geometric shapes	2
Spatial relationships and coordinate geometry	2
Transformation and symmetry	2
Visualization/special reasoning/ Geometric modeling	2
Measurement tools	3
Concepts and attributes of measurement	3
Formulas of measurement	3
Data and statistics	4
Probability	5

The following table reflects proportional coverage of CIS Math items identified as being aligned with VSC Topics.

CIS Math Emphases, Grades 3-8 (N = 368 item endorsements, 38 respondents)

	Attention	Memorize/ Recall	Perform	Compre- hend	Apply	Analyze/ Synthesize/ Evaluate
1. Algebra, patterns, and functions	0.057	0.041	0.06	0.0245	0.043	0.003
2. Geometry	0.041	0.049	0.071	0.0326	0.035	0.014
3. Measurement	0.049	0.033	0.052	0.0272	0.038	0.003
4. Statistics	0.022	0.008	0.024	0.0054	0.003	0.005
5. Probability	0.022	0.016	0.005	0.0054	0.003	
6. Number relationships and computation/arithmetic	0.022	0.027	0.063	0.038	0.052	0.008
7. Process of mathematics						

The table below shows the proportional content by DOK coverage of Math alternate assessments in the grades 3-8 alignment study sample.

Math Alternate Assessment Emphases, Grades 3-8 (N = 1,421)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1. Algebra, patterns, and functions		0.008	0.359	0.003	0.203	0.427
2. Geometry		0.081	0.565	0.063	0.063	0.164
3. Measurement		0.010	0.318	0.005	0.057	0.508
4. Statistics		0.005	0.299	0.000	0.018	0.544
5. Probability						
6. Number relationships and computation/arithmetic		0.143	0.346	0.008	0.378	0.122
7. Process of mathematics						

On the whole, teacher-reported curriculum emphases in grades 3-8 covered a broader range of content and DOK than what was emphasized in the alternate assessment. While Probability had some emphasis on the CIS, it was not represented in the alternate assessment sample. Processes of mathematics were represented in neither the CIS nor the alternate assessment portfolios.

The CIS and alternate assessment matrices were then compared cell by cell to identify areas of consistency and discrepancy between the enacted curriculum reported by teachers in 2006-07 and the emphases in the alternate assessment math samples from grades 3-8. The table below summarizes this comparison. CIS responses showed greater emphases at the attention and comprehension levels, as indicated by positive numbers in those DOK columns. The alternate assessment items had greater emphasis at the performance, application, and analysis/synthesis/evaluation levels than what teachers report teaching to the target students this year.

Boxes around cells are used to highlight places where the proportional discrepancies were greater than 0.05 (essentially, more than five percentage points).

Discrepancy between CIS and Grades 3-8 Alternate Assessment Math Emphases (CIS – AA)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1. Algebra, patterns, and functions	0.057	0.033	-0.300	0.022	-0.160	-0.424
2. Geometry	0.041	-0.032	-0.494	-0.030	-0.027	-0.150
3. Measurement	0.049	0.022	-0.266	0.022	-0.019	-0.505
4. Statistics	0.022	0.003	-0.275	0.005	-0.016	-0.539
5. Probability	0.022	0.016	0.005	0.005	0.003	
6. Number relationships and computation/arithmeti	0.022	-0.116	-0.284	0.030	-0.326	-0.114
7. Process of mathematics						

Blank cells indicate no coverage in either CIS or Alternate Assessment.

High School

The correspondence between CIS topics and State’s Math CLG topics are shown below. All but three CIS items matched one of the State CLG topics, and all CLG topics had direct CIS links.

CIS Topic	CLG Topic
Number Sense	None
Operations	None
Computation and Estimation	None
Patterns, relations, and functions	1
Algebra	1
Relations and mathematical models	1
Variables and change	1
Characteristics of geometric shapes	2
Spatial relationships and coordinate geometry	2
Transformation and symmetry	2
Visualization/special reasoning/ Geometric modeling	2
Measurement tools	2
Concepts and attributes of measurement	2
Formulas of measurement	2
Data and statistics	3
Probability	3

The following table reflects proportional coverage of CIS Math items identified as being aligned with CLG Topics.

CIS Math Emphases, High School (N = 110 item endorsements, 14 respondents)

	Attention	Memorize/ Recall	Perform	Compre- hend	Apply	Analyze/ Synthesize/ Evaluate
1. Functions and Algebra	0.118	0.027	0.082	0.0091	0.036	0.018
2. Geometry, Measurement, and Reasoning	0.282	0.073	0.1	0.0182	0.045	0.018
3. Data analysis and probability	0.082	0.036	0.009	0.0182		0.027

The table below shows the proportional content x DOK coverage of Math alternate assessments in the alignment study sample.

Math Alternate Assessment Emphases, High School (N = 315)

	Attention	Memorize/ Recall	Perform	Compre- hend	Apply	Analyze/ Synthesize / Evaluate
1. Functions and Algebra		0.025	0.244	0.025	0.067	0.327
2. Geometry, Measurement, and Reasoning		0.041	0.108		0.063	0.098
3. Data analysis and probability						

On the whole, teacher-reported curriculum emphases covered a broader range of content and DOK than what was emphasized in the alternate assessment. CIS content covered all three topics and all levels of DOK, with the exception of Data Analysis and Probability and the application level. The alternate assessment sample included no evidence of Data Analysis and Probability, or any content assessed at the attention level.

The CIS and alternate assessment matrices were then compared cell by cell to identify areas of consistency and discrepancy between the enacted curriculum reported by teachers in 2006-07 and the emphases in the high school alternate assessment math samples. The table below summarizes this comparison. CIS responses showed greater emphases at the attention and memorize/recall levels, as indicated by positive numbers in those DOK columns. The alternate assessment evidence had greater emphasis on Functions and Algebra, and in content at the higher levels of DOK than what teachers report teaching to the target students this year.

Boxes around cells are used to highlight places where the proportional discrepancies were greater than 0.05.

Discrepancy between CIS and Alternate Assessment Emphases, High School (CIS – AA)

	Attention	Memorize/ Recall	Perform	Comprehend	Apply	Analyze/ Synthesize/ Evaluate
1. Functions and Algebra	0.118	0.002	-0.163	-0.016	-0.030	-0.309
2. Geometry, Measurement, and Reasoning	0.282	0.031	-0.008	0.018	-0.018	-0.080
3. Data analysis and probability	0.082	0.036	0.009	0.018		0.027

Blank cells indicate no coverage in either CIS or Alternate Assessment.

SCIENCE

A total of 47 teachers completed the science section of the CIS. This section summarizes teacher responses to the science section as well as science-related items from Part I of the survey (general background).

Science Content

The table below provides an overview of the distributions of depth of knowledge (DOK) expected of target students for items within each of the six science topics. Frequencies represent the number of items, across target students, for whom the content was taught in 2006-07. Distributions of DOK expectations for each item within each topic are reported in Table S.1 in the appendix.

Distribution of Science Content Taught, by Depth of Knowledge

Topic	N	Attention		Memorize/ Recall		Perform		Comprehend		Apply		Analyze/ Synthesize/ Evaluate	
		n	%	n	%	n	%	n	%	n	%	n	%
Earth and Space Science	88	30	34.1	15	17.0	16	18.2	17	19.3	7	8.0	3	3.4
Life Science (Biology)	219	98	44.7	44	20.1	31	14.2	28	12.8	13	5.9	5	2.3
Physical Science (Chemistry & Physics)	110	38	34.5	25	22.7	24	21.8	15	13.6	4	3.6	4	3.6
Technology/Engineering	23	6	26.1	4	17.4	6	26.1	2	8.7	4	17.4	1	4.3
History/Nature of Science	47	19	40.4	12	25.5	12	25.5	2	4.3	0	0.0	2	4.3
Science as inquiry	32	13	40.6	6	18.8	8	25.0	2	6.3	1	3.1	2	6.3

The most frequently taught science subject was life science. The most frequent responses within this category were for the items related to personal and community health (18%), characteristics of organisms, (18%), and environments, populations, and ecosystems (15%; see Table S.1). Physical Science and Earth and Space Science were the other two most frequently reported science topics included in the enacted curriculum for target students in 2006-07. In most topics, the highest performance expectation for more than half the target students in the current academic year was either attending to the content, or memorizing and recalling the content. There was a higher proportion expected to apply knowledge in Technology/Engineering compared with other topics. Very few students were required to analyze, synthesize, or evaluate material.

Grade Level Materials, Activities, and Contexts

After identifying each type of science content and DOK at which the target students were taught, teachers were also asked to identify the grade band or grade from which activities, materials, and contexts were adapted to teach the corresponding science content. The table below summarizes the distribution of responses to items within each science topic. (Respondents could identify more than one grade band if applicable to the target student.)

More than half of science materials, activities, and contexts were adapted from elementary grade bands, with the exception of Technology/Engineering (48% from elementary grade bands). The Technology/Engineering topic also had the highest proportion of materials, activities, and contexts taught that were not linked to a specific grade band (24%).

Percent of CIS items taught to target student with materials, activities, contexts in each grade band

	pK-2			3-5		6-8		9-12		No grade band		Specific grade	
	N	n	%	n	%	n	%	n	%	n	%	n	%
Earth and Space Science	114	39	34.2	32	28.1	23	20.2	8	7.0	8	7.0	4	3.5
Life Science (Biology)	290	98	33.8	69	23.8	63	21.7	26	9.0	24	8.3	10	3.4
Physical Science (Chemistry & Physics)	145	50	34.5	37	25.5	30	20.7	11	7.6	7	4.8	10	6.9
Technology/Engineering	29	9	31.0	5	17.2	4	13.8	3	10.3	7	24.1	1	3.4
History/Nature of Science	57	19	33.3	16	28.1	14	24.6	4	7.0	0	0.0	4	7.0
Science as inquiry	40	17	42.5	10	25.0	7	17.5	3	7.5	1	2.5	2	5.0

Other Science Instruction Information

Tables S.2 – S.5 in the appendix provide additional results related to science instruction. Highlights of these findings are as follow:

- **Instructional activities:** The most frequently reported instructional methods used recently with the target students in science were small group instruction, scaffolded instruction with supports, and the use of hands-on materials and manipulatives. Science instruction may not have a large emphasis in target students’ overall educational program, as evidenced by the high rates at which science methods were reported to have been used one hour or less in the past week, or not at all. When certain science instruction methods were used, the expectation for the target student tended to include some level of support or limited participation, rather than independent, active performance within the lesson.
- **Resources:** Teachers most often reported using teacher-made materials or commercially prepared materials adapted from general education in order to teach science lessons. Many used functional, real-life materials (69%), although fewer taught science concepts in real-life settings. Fewer than half of teachers reported enlisting support from general educators, support staff, or nondisabled peers to assist with science instruction.
- **Instructional influences:** The strongest influences on teachers’ choices about science instruction are student needs as documented in IEPs (96% moderate to strong influence), classroom assessment results (91% moderate to strong influence), and alternate assessment requirements (89% moderate to strong influence). The items most often rated as having minimal to no influence on respondents’ science instructional choices were national science standards and science content used by general education teachers at the school.
- **Classroom assessment:** For the purpose of assessing their students in science, teachers reported using observational data most frequently (69% once per week or more frequently), followed by performance on-demand (56% once per week or more often) and objective tests (49%).

CIS SHORT VERSION: CONCLUSIONS

Teachers who completed the short version of the CIS are teaching a broad range of content in English language arts, math, and science. In ELA, the range of content includes topics covered by the alternate assessment in Reading as well as other components of ELA, although the greatest emphasis was in Reading. In science and math, the range of content taught was also broader than what was emphasized in the alternate assessment. In general, there was also a range of DOK reported for this sample of target students. In some cases, the span of DOK was wider than what was reflected in the alternate assessments.

The State Department of Education may want to further consider discrepancies between the symbolic communication skills of students in the sample and evidence of high expectations in instruction. For example, while the majority of target students in the sample (84%) had early symbolic or symbolic communication, teachers frequently reported teaching content at the “attention” level – requiring only eye gaze, vocalization, or some other form of minimal, intentional response. Similarly, there were low rates of expected independent, active participation of these students in most instructional activities.

According to federal guidelines, alternate assessments judged against alternate academic achievement standards are supposed to be aligned to grade level expectations, however, the activities, materials, and contexts teachers report using during instruction tend to be adapted from grades pK-2 or 3-5. The frequency with which materials were adapted from high school was not consistent with the composition of the target student group identified for this study (27% high school). In order to provide instruction that is more consistent with the content of alternate assessments aligned to grade level expectations, teachers may require more professional development on how to adapt materials and activities from grade levels that match the chronological age of their students.

Alignment results should be interpreted with caution, based on the low response rates and characteristics of the target students identified for the survey (e.g., more elementary and middle grades than high school; primarily students with some symbolic communication). Areas of discrepancy between instructional and alternate assessment emphases are identified for State DOE’s formative use, and are not intended to be conclusive, summative statements about the quality of alignment of instruction with the assessment.

Finally, teachers’ responses to survey questions about instructional influences suggest that there may be room for growth in their ways of building access to the general curriculum. While most report that state standards have a strong influence on what they teach, respondents are not yet as concerned as they could be about what their general education counterparts are teaching in the content areas, or what the general education academic priorities are within their school or district. Increasing student access to the general education curriculum and better aligning instruction in order to increase academic achievement may require more professional development and strengthened relationships with general educators in the same schools.

Short version: Appendix

English Language Arts

- E1** Distribution of ELA Content Taught, by Depth of Knowledge
- E2** ELA Instructional Methods and Level of Student Participation
- E3** Percent of Teachers Using Various Resources to Teach ELA
- E4** Teacher-Reported Influences on ELA Instruction
- E5** Frequency of Use of Classroom Assessments – ELA

Math

- M1** Distribution of Math Content Taught, by Depth of Knowledge
- M2** Math Instructional Methods and Level of Student Participation
- M3** Percent of Teachers Using Various Resources to Teach Math
- M4** Teacher-Reported Influences on Math Instruction
- M5** Frequency of Use of Classroom Assessments – Math

Science

- S1** Distribution of Science Content Taught, by Depth of Knowledge
- S2** Science Instructional Methods and Level of Student Participation
- S3** Percent of Teachers Using Various Resources to Teach Science
- S4** Teacher-Reported Influences on Science Instruction
- S5** Frequency of Use of Classroom Assessments – Science

In each subject, first two tables are based on academic section of CIS (Part 3, 4, or 5; referenced to the target student), while last three are based on Part 1 (General classroom information; not about a specific target student).

Table E.1. Distribution of ELA Content Taught, by Depth of Knowledge (N = 50)

Item	LANGUAGE	N	Attention		Mem/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
A1	Discussion (discussion rules, group interactions)	45	10	22.2	9	20.0	13	28.9	2	4.4	9	20.0	2	4.4
A2	Questioning, Listening, and Contributing (class discussion contributions, gathering information)	47	9	19.1	7	14.9	12	25.5	10	21.3	7	14.9	2	4.3
A3	Oral Presentation (presentation elements and techniques, presentation preparation)	39	13	33.3	4	10.3	15	38.5	3	7.7	4	10.3		0.0
A4	Vocabulary and Concept Development (antonyms, synonyms, compound words, prefixes, suffixes, dictionary use, use in context)	47	9	19.1	12	25.5	7	14.9	9	19.1	9	19.1	1	2.1
A5	Structure and Origins of Modern English (grammar, mechanics, parts of speech)	32	6	18.8	9	28.1	11	34.4	2	6.3	4	12.5		0.0
A6	Formal and Informal English (standard vs. conversational language)	27	5	18.5	10	37.0	6	22.2	1	3.7	4	14.8	1	3.7
	Total	237	52	21.9	51	21.5	64	27.0	27	11.4	37	15.6	6	2.5
READING AND LITERATURE														
B1	Beginning Reading (letters, handling of a book, phonemic awareness, letter/sound combinations, decode words)	45	7	15.6	6	13.3	17	37.8	2	4.4	11	24.4	2	4.4
B2	Understanding a Text (predictions, retell stories, cause/effect, story elements, imagery, symbolism)	47	10	21.3	10	21.3	10	21.3	6	12.8	9	19.1	2	4.3
B3	Making Connections (compare authors, illustrators, settings)	40	8	20.0	13	32.5	11	27.5	3	7.5	5	12.5		0.0
B4	Genre (forms of literature- poetry, prose, fiction, nonfiction, drama)	39	13	33.3	15	38.5	5	12.8	4	10.3	2	5.1		0.0
B5	Theme (lessons of folktales, fables, myths, theme identification)	31	11	35.5	8	25.8	6	19.4	5	16.1	1	3.2		0.0
B6	Fiction (plot, character, setting identification of stories)	47	12	25.5	16	34.0	7	14.9	8	17.0	3	6.4	1	2.1
B7	Nonfiction (meaning, prediction, and fact identification of informational material)	46	12	26.1	10	21.7	8	17.4	7	15.2	8	17.4	1	2.2
B8	Poetry (rhythm and rhyme, repetition, imagery, figurative language)	33	15	45.5	11	33.3	6	18.2	1	3.0		0.0		0.0

Item	READING AND LITERATURE (cont.)	N	Attention		Mem/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
B9	Style and Language (words that appeal to the senses, imagery, figurative language, flow)	29	7	24.1	10	34.5	7	24.1	5	17.2		0.0		0.0
B10	Myth, Traditional Narrative, and Classical Literature (characters in mythology, adventures/exploits of characters)	26	11	42.3	10	38.5	3	11.5	2	7.7		0.0		0.0
B11	Dramatic Literature (elements of dialogue, elements of drama, role play)	25	12	48.0	6	24.0	6	24.0		0.0		0.0	1	4.0
B12	Dramatic Reading and Performance (rehearsal and performance of stories, plays, poems, voice inflection)	25	10	40.0	7	28.0	7	28.0		0.0		0.0	1	4.0
	Total	433	128	29.6	122	28.2	93	21.5	43	9.9	39	9.0	8	1.8
COMPOSITION														
C1	Writing (use of pictures, letters, words to write stories, poems, letters, reports)	38	5	13.2	3	7.9	17	44.7	6	15.8	7	18.4		0.0
C2	Consideration of Audience and Purpose (language to match audience and purpose-entertain, persuade, inform)	25	6	24.0	9	36.0	4	16.0	4	16.0	2	8.0		0.0
C3	Revising (clarification/rethinking for logic and expression)	27	7	25.9	9	33.3	10	37.0		0.0	1	3.7		0.0
C4	Standard English Conventions (legible print/cursive, spacing of words, spelling, end marks, punctuation)	32	1	3.1	5	15.6	14	43.8	4	12.5	7	21.9	1	3.1
C5	Organizing Ideas in Writing (order of events, details, logical progression)	31	4	12.9	9	29.0	11	35.5	5	16.1	1	3.2	1	3.2
C6	Research (gather information about a topic, steps of conducting research)	22	4	18.2	9	40.9	8	36.4		0.0	1	4.5		0.0
C7	Evaluating Writing and Presentations (decisions and judgments about writing; use of scoring rubrics)	18	5	27.8	6	33.3	6	33.3	1	5.6		0.0		0.0
	Total	193	32	16.6	50	25.9	70	36.3	20	10.4	19	9.8	2	1.0

Item	MEDIA	N	Attention		Mem/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
D1	Analysis of Media (text/film/play/website comparison)	22	9	40.9	9	40.9	1	4.5	2	9.1	1	4.5		0.0
D2	Media Production (PowerPoint or other technological presentation, video/audio tape)	26	13	50.0	6	23.1	3	11.5		0.0	4	15.4		0.0
	Total	48	22	45.8	15	31.3	4	8.3	2	4.2	5	10.4	0	0.0

Table E.2. ELA Instructional Methods and Level of Target Student's Participation (N = 50)

ELA/reading instructional time during the past week in which the target student engaged in each of the following						Level of Student Participation			
	0 None	1 Little (1 hour or less last week)	2 Some (2-4 hours last week)	3 Moderate (5-7 hours last week)	4 Considerable (8 or more hours last week)	N No Partici- pation	P Passive Partici- pation	AS Active Participa- tion with Supports	IA Independent Active Participation
Receive individualized instruction	0	16.0	24.0	20.0	40.0	2.0	6.0	80.0	12.0
Receive instruction in a small group	2.0	2.0	18.0	34.0	44.0	4.0	12.0	66.0	18.0
Collect, summarize, or analyze information	22.0	28.0	24.0	18.0	8.0	34.0	26.0	36.0	4.0
Engage in writing process	32.0	14.0	24.0	20.0	10.0	36.0	10.0	50.0	4.0
Learn to use resources	32.0	30.0	24.0	14.0	0	34.0	28.0	36.0	2.0
Use hands-on or manipulatives	4.0	10.0	6.0	38.0	42.0	2.0	10.0	72.0	16.0
Receive instruction with prompts or scaffolded support	2.0	6.0	12.0	28.0	52.0	2.0	12.0	80.0	6.0
Use computers or other assistive technology	2.0	20.0	30.0	32.0	16.0	4.0	18.0	52.0	26.0
Work independently	20.0	42.0	28.0	10.0	0	34.0	16.0	32.0	18.0
Perform assessment skills for data collection/grading	20.0	20.0	38.0	18.0	4.0	26.0	18.0	50.0	6.0
Take a test	50.0	36.0	6.0	6.0	2.0	52.0	8.0	30.0	10.0
Practice skills in different setting	18.0	26.0	42.0	10.0	4.0	14.0	28.0	54.0	4.0
Practice skills with a variety of similar materials	8.0	26.0	44.0	18.0	4.0	10.0	28.0	58.0	4.0
Engage in read aloud activities	16.0	38.0	14.0	22.0	10.0	22.0	22.0	48.0	8.0
View multi media presentations	24.0	32.0	26.0	10.0	8.0	28.0	28.0	28.0	16.0
Engage in speech or presentation	62.0	24.0	4.0	2.0	8.0	56.0	16.0	24.0	4.0
Use work center	42.0	10.0	32.0	12.0	4.0	40.0	14.0	40.0	6.0
Learn/demonstrate skills in repeated opportunity/direct instruction trials	8.0	16.0	28.0	30.0	18.0	8.0	16.0	62.0	14.0

Table E.3. Percent of Teachers Using Various Resources to Teach ELA (N = 55)

	Used to teach ELA/Reading
Materials	
Commercially made materials adapted (by you or someone else) from general education	89.1
Commercially made manipulatives adapted (by you or someone else) from general education	65.5
Age-appropriate, commercially made print or text materials <i>designed for this type of student</i>	72.7
Age-appropriate, commercially made manipulatives <i>designed for this type of student</i>	54.5
Other commercially made print or text materials <i>designed for this type of student</i>	54.5
Other commercially made age-appropriate manipulatives <i>designed for this type of student</i>	45.5
Teacher-made books, workbooks, materials	96.4
Teacher-made manipulatives	89.1
Materials or lessons from websites	80.0
Computer	81.8
Assistive technologies (e.g., CheapTalk, Big Mac, Dynavox, text reader, talking calculator, etc.)	72.7
Settings	
Real life or natural setting materials (e.g., coins, community signs, telephones)	78.2
Inclusive class setting	38.2
Other settings in my school	67.3
Other settings in the community	54.5
People	
Nondisabled peers	27.3
Teachers from other disciplines (e.g., academic or special subject areas)	34.5
Another staff member at the school (e.g., speech/occupational/physical therapist)	72.7
Other special education teachers	50.9

Table E.4. Teacher-Reported Influences on ELA Instruction (N = 55)

	No influence	Minimal influence	Moderate influence	Strong influence
State curriculum framework or content standards	0	27.3	25.5	47.3
Instructional materials	1.9	14.8	37.0	46.3
State alternate assessment requirements	0	10.9	25.5	63.6
State alternate assessment results from previous years	18.2	20.0	36.4	25.5
National ELA standards	31.5	29.6	24.1	14.8
ELA content, materials, and/or activities used by general education teachers in my school	33.3	20.4	25.9	20.4
Training from my degree program (undergraduate or graduate)	18.2	18.2	34.5	29.1
Students' needs as documented on IEPs	0	3.6	3.6	92.7
School or district initiatives or priorities	7.4	29.6	27.8	35.2
Principal or other administrator expectations	7.3	25.5	36.4	30.9
Professional development experiences	5.5	18.2	49.1	27.3
Classroom assessment results	0	9.1	18.2	72.7

Table E.5. Percent Reporting Frequency of Use of Classroom Assessments – ELA (N = 55)

	Not at all	< 1 time per month	1-4 times a month	1-4 times a week	> 4 times a week
Objective questions (e.g., true/false, multiple choice, yes/no)	11.1	11.1	13.0	35.2	29.6
Performance on-demand (e.g., task analysis steps, repeated trials, incidence recording)	5.5	1.8	16.4	32.7	43.6
Teacher observation (e.g., anecdotal or descriptive data)	1.8	7.3	10.9	20.0	60.0

Table M.1. Distribution of Math Content Taught, by Depth of Knowledge (N = 47)

Item	Number Sense and Operations	N	Attention		Mem/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
A1	Number Sense (whole numbers, fractions, odd & even, sorting, matching, grouping, ordering; money)	47	8	17.0	5	10.6	11	23.4	5	10.6	17	36.2	1	2.1
A2	Operations (+, -, x /, commutative properties, order of operations)	35	6	17.1	4	11.4	12	34.3	5	14.3	6	17.1	2	5.7
A3	Computation and Estimation (comparisons, rounding, properties of addition, subtraction, multiplication, division)	34	6	17.6	5	14.7	11	32.4	5	14.7	5	14.7	2	5.9
	Total	116	20	17.2	14	12.1	34	29.3	15	12.9	28	24.1	5	4.3
Patterns, Relations, and Algebra														
B1	Patterns, Relations, and Functions (identify, reproduce, create, count in patterns)	46	8	17.4	4	8.7	15	32.6	5	10.9	12	26.1	2	4.3
B2	Algebra (symbolic representations, variables, algebraic equations)	27	8	29.6	7	25.9	6	22.2	2	7.4	3	11.1	1	3.7
B3	Relationships and Mathematical Models (equivalent measurements, mathematical relationships, proportions)	32	11	34.4	5	15.6	9	28.1	3	9.4	4	12.5		0.0
B4	Variables and Change (process and rates of change, linear equations)	16	8	50.0	3	18.8	3	18.8	1	6.3	1	6.3		0.0
	Total	121	35	28.9	19	15.7	33	27.3	11	9.1	20	16.5	3	2.5
Geometry														
C1	Characteristics of Geometric Shapes (two and three dimensional shapes, congruent shapes)	42	10	23.8	6	14.3	11	26.2	7	16.7	5	11.9	3	7.1
C2	Spatial Relationships/ Coordinate Geometry (coordinates, points on a line)	27	7	25.9	4	14.8	8	29.6	4	14.8	3	11.1	1	3.7
C3	Transformation/Symmetry (flipped, turned shapes, line and rotational symmetry)	29	6	20.7	11	37.9	7	24.1	2	6.9	2	6.9	1	3.4
C4	Visualization/Spatial Reasoning/Geometric Modeling (assembled and disassembled shapes, use of tools (e.g., ruler, compass) to create geometric figures)	30	10	33.3	3	10.0	12	40.0	2	6.7	3	10.0		0.0
	Total	128	33	25.8	24	18.8	38	29.7	15	11.7	13	10.2	5	3.9

Item	Measurement	N	Attention		Mem/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
D1	Measurement Tools (clock, calendar, cylinder, tape measure, ruler)	46	10	21.7	7	15.2	13	28.3	4	8.7	9	19.6	3	6.5
D2	Concepts and Attributes of Measurement (length, weight, volume, capacity)	44	18	40.9	3	6.8	12	27.3	3	6.8	8	18.2		0.0
D3	Formulas of Measurement (area, perimeter, radius, diameter, circumference)	21	7	33.3	6	28.6	2	9.5	4	19.0	2	9.5		0.0
	Total	111	35	31.5	16	14.4	27	24.3	11	9.9	19	17.1	3	2.7
Data Analysis, Statistics, And Probability														
E1	Data and Statistics (data collection and organization, mean, median, mode, use of plots and graphs)	37	13	35.1	5	13.5	12	32.4	2	5.4	1	2.7	4	10.8
E2	Probability (cause/effect, probabilities, combinations of potential outcomes)	30	12	40.0	8	26.7	3	10.0	5	16.7	1	3.3	1	3.3
	Total	67	25	37.3	13	19.4	15	22.4	7	10.4	2	3.0	5	7.5

Table M.2. Math Instructional Methods and Level of Target Student's Participation (N = 47)

Amount of math instructional time during the past week in which the target student engaged in each of the following...						Level of student participation*			
	None	Little (1 hour or less last week)	Some (2-4 hours last week)	Moderate (5-7 hours last week)	Considerable (8 or more hours last week)	No Participation	Passive Participation	Active Participation with Supports	Independent Active Participation
Receive individualized instruction	0	10.6	36.2	23.4	29.8	0	10.6	80.9	8.5
Receive instruction in a small or large group	4.3	6.4	19.1	34.0	36.2	4.3	8.5	74.5	12.8
Collect, summarize, or analyze information	29.8	21.3	38.3	10.6	0	36.2	21.3	42.6	0
Complete symbolic math problems	29.8	23.4	21.3	23.4	2.1	27.7	12.8	51.1	8.5
Learn to use resources	29.8	29.8	21.3	17.0	2.1	31.9	21.3	44.7	2.1
Use hands-on or manipulatives to count or solve mathematical problems	4.3	8.5	17.0	34.0	36.2	2.1	12.8	68.1	17.0
Receive instruction with prompts or scaffolded support	2.1	12.8	19.1	36.2	29.8	0	12.8	83.0	4.3
Use computers, calculators or other assistive technology	10.6	17.0	31.9	14.9	25.5	12.8	6.4	59.6	21.3
Work independently	34.0	23.4	19.1	21.3	2.1	29.8	14.9	38.3	17.0
Perform assessment skills for data collection/grading	27.7	34.0	21.3	14.9	2.1	27.7	12.8	59.6	0
Take a test	53.2	23.4	14.9	4.3	4.3	53.2	8.5	34.0	4.3
Practice skills in different setting	19.1	29.8	23.4	27.7	0	17.0	14.9	61.7	6.4
Rote count	27.7	23.4	25.5	14.9	8.5	25.5	4.3	53.2	17.0
Practice skills with a variety of materials	4.3	14.9	40.4	27.7	12.8	4.3	14.9	70.2	10.6
Apply mathematical concepts to real world applications	6.4	25.5	36.2	23.4	8.5	6.4	21.3	68.1	4.3
Use work center	40.4	25.5	10.6	17.0	6.4	38.3	14.9	36.2	10.6
Learn/demonstrate skills in repeated opportunity/direct instruction trials	6.4	27.7	21.3	34.0	10.6	10.6	10.6	74.5	4.3

* Rated only for target students who received little, some, moderate, or considerable instruction using this method.

Table M.3. Percent of Teachers Using Various Resources to Teach Math (N = 55)

	Used to teach Math
Materials	
Commercially made materials adapted (by you or someone else) from general education	81.8
Commercially made manipulatives adapted (by you or someone else) from general education	87.3
Age-appropriate, commercially made print or text materials <i>designed for this type of student</i>	54.5
Age-appropriate, commercially made manipulatives <i>designed for this type of student</i>	63.6
Other commercially made print or text materials <i>designed for this type of student</i>	49.1
Other commercially made age-appropriate manipulatives <i>designed for this type of student</i>	52.7
Teacher-made books, workbooks, materials	96.4
Teacher-made manipulatives	96.4
Materials or lessons from websites	70.9
Computer	81.8
Assistive technologies (e.g., CheapTalk, Big Mac, Dynavox, text reader, talking calculator, etc.)	65.5
Settings	
Real life or natural setting materials (e.g., coins, community signs, telephones)	90.9
Inclusive class setting	40.0
Other settings in my school	61.8
Other settings in the community	58.2
People	
Nondisabled peers	25.5
Teachers from other disciplines (e.g., academic or special subject areas)	27.3
Another staff member at the school (e.g., speech/occupational/physical therapist)	38.2
Other special education teachers	45.5

Table M.4. Teacher-Reported Influences on Math Instruction (N = 55)

	No influence	Minimal influence	Moderate influence	Strong influence
State curriculum framework or content standards	5.5	21.8	25.5	47.3
Instructional materials	3.6	16.4	47.3	32.7
State alternate assessment requirements	1.8	12.7	20.0	65.5
State alternate assessment results from previous years	16.7	31.5	27.8	24.1
National math standards	27.3	34.5	27.3	10.9
Math content, materials, and/or activities used by general education teachers in my school	29.1	27.3	29.1	14.5
Training from my degree program (undergraduate or graduate)	20.0	21.8	32.7	25.5
Students' needs as documented on IEPs	1.8	1.8	3.6	92.7
School or district initiatives or priorities	7.5	37.7	24.5	30.2
Principal or other administrator expectations	9.1	32.7	27.3	30.9
Professional development experiences	7.4	22.2	40.7	29.6
Classroom assessment results	0	31.0	20.4	66.7

Table M.5. Percent Reporting Frequency of Use of Classroom Assessments – Math (N = 55)

	Not at all	< 1 time per month	1-4 times a month	1-4 times a week	> 4 times a week
Objective questions (e.g., true/false, multiple choice)	20.0	12.7	14.5	34.5	18.2
Performance on-demand (e.g., data collected on student performance of task analysis steps)	1.8	5.5	20.0	29.1	43.6
Teacher observation	0	5.5	10.9	27.3	56.4

Table S.1. Distribution of Science Content Taught, by Depth of Knowledge (N = 47)

Item	Earth and Space Science	Attention			Memorize/Recall		Perform		Comprehend		Apply		An/Syn/Eval		
		N	n	%	n	%	n	%	n	%	n	%	n	%	
A1	Structure and energy in the Earth's system. (Weather, minerals, rocks)	41	10	24.4	8	19.5	8	19.5	7	17.1	5	12.2	3	7.3	
A2	History, origin, and evolution of the earth and the universe. (Changes in the Earth's surface, Big Bang Theory)	20	10	50.0	3	15.0	3	15.0	4	20.0		0.0		0.0	
A3	Earth, the Solar System, and objects in the sky. (Moon phases, tides, tilt of the earth, motion of the Earth)	27	10	37.0	4	14.8	5	18.5	6	22.2	2	7.4		0.0	
	Total	88	30	34.1	15	17.0	16	18.2	17	19.3	7	8.0	3	3.4	
Life Science (Biology)															
B1	Characteristics of organisms (Organ systems, plants and animals, plant structures)	39	12	30.8	15	38.5	6	15.4	4	10.3	1	2.6	1	2.6	
B2	Life cycles of organisms (birth, development, reproduction, death)	25	12	48.0	7	28.0		0.0	5	20.0	1	4.0		0.0	
B3	Organisms and environments, populations, and ecosystems (extinction, food web, changes in ecosystems)	33	19	57.6	5	15.2	2	6.1	4	12.1	2	6.1	1	3.0	
B4	Cellular and molecular basis of life. (animal cells, multicellular organisms, organic molecules, types of cells, organelles)	17	8	47.1	4	23.5	2	11.8	3	17.6		0.0		0.0	
B5	Reproduction and heredity, diversity, adaptations, and evolution of organisms. (traits and genes, reproduction, Mendel, Punnett squares, DNA, natural selection, biodiversity)	17	9	52.9	2	11.8	3	17.6	2	11.8	1	5.9		0.0	
B6	Regulation and behavior of organisms (Instinct and learned behavior, animal and plant behaviors, interaction with the environment)	27	14	51.9	6	22.2	3	11.1	2	7.4	2	7.4		0.0	
B7	Matter, energy, and organization in living systems	23	10	43.5	2	8.7	6	26.1	4	17.4	1	4.3		0.0	
B8	Personal and Community Health (diseases, nutrition, fitness, environmental hazards)	38	14	36.8	3	7.9	9	23.7	4	10.5	5	13.2	3	7.9	
	Total	219	98	44.7	44	20.1	31	14.2	28	12.8	13	5.9	5	2.3	

Item	Physical Science (Chemistry and Physics)	Attention			Memorize/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
		N	n	%	n	%	n	%	n	%	n	%	n	%
C1	Properties of matter (size, shape, color, states of matter, weight and mass, elements and compounds, periodic table)	34	9	26.5	9	26.5	8	23.5	5	14.7	2	5.9	1	2.9
C2	Chemical and physical changes in matter. (changes in state, boiling and melting points, bonding, reactions, chemical equations, acids and bases)	23	8	34.8	4	17.4	6	26.1	2	8.7	2	8.7	1	4.3
C3	Motion and forces (speed and velocity, mass and inertia, vectors, Newton's laws, waves)	18	7	38.9	3	16.7	3	16.7	4	22.2		0.0	1	5.6
C4	Energy (conservation of energy, forms of energy, electricity, magnets, light, sound, heat, potential and kinetic energy, temperature)	30	11	36.7	8	26.7	7	23.3	3	10.0		0.0	1	3.3
C5	Atomic theory (Atoms and molecules, fission and fusion, nuclear reactions, Lewis dot structures)	5	3	60.0	1	20.0		0.0	1	20.0		0.0		0.0
	Total	110	38	34.5	25	22.7	24	21.8	15	13.6	4	3.6	4	3.6
Technology /Engineering														
D1	Materials and Tools (uses of materials, proper uses, machines, technology, invention)	23	6	26.1	4	17.4	6	26.1	2	8.7	4	17.4	1	4.3
	Total	23	6	26.1	4	17.4	6	26.1	2	8.7	4	17.4	1	4.3
History/Nature of Science														
E1	Science as a human endeavor. (diversity among scientists, talents and skills of scientists)	12	4	33.3	4	33.3	3	25.0		0.0		0.0	1	8.3
E2	Nature of science (scientific method, hypotheses, laws, and theories)	23	8	34.8	5	21.7	7	30.4	2	8.7		0.0	1	4.3
E3	History of science (Science in different cultures, rate of advancement, scientific revolutions)	12	7	58.3	3	25.0	2	16.7		0.0		0.0		0.0
	Total	47	19	40.4	12	25.5	12	25.5	2	4.3	0	0.0	2	4.3

Item	Science as Inquiry	N	Attention		Memorize/Recall		Perform		Comprehend		Apply		An/Syn/Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
F1	Understanding of and abilities necessary to do scientific inquiry. (Asking questions, forming hypotheses, conducting experiments)	32	13	40.6	6	18.8	8	25.0	2	6.3	1	3.1	2	6.3
	Total	32	13	40.6	6	18.8	8	25.0	2	6.3	1	3.1	2	6.3

Table S.2. Science Instructional Methods and Level of Target Student's Participation (N = 47)

						Level of student participation			
	0 None	1 Little (1 hour or less last week)	2 Some (2-4 hours last week)	3 Moderate (5-7 hours last week)	4 Considerable (8 or more hours last week)	N No Partici- pation	P Passive Partici- pation	AS Active Participa- tion with Supports	IA Independent Active Participation
Receive individualized instruction	17.0	40.4	21.3	8.5	12.8	2.6	28.2	64.1	5.1
Receive instruction in a small group	8.5	19.1	38.3	14.9	19.1	2.3	25.6	65.1	7.0
Collect, summarize, or analyze information	31.9	34.0	29.8	4.3	0	9.4	25.0	65.6	0
Engage in inquiry processes	42.6	21.3	31.9	4.3	0	22.2	22.2	55.6	0
Learn to use resources	42.6	23.4	19.1	14.9	0	18.5	14.8	66.7	0
Use hands-on materials or manipulatives	8.5	23.4	42.6	12.8	12.8	12.8	21.3	59.6	6.4
Receive instruction with prompts or scaffolded support	8.5	27.7	34.0	19.1	10.6	10.6	19.1	70.2	0
Use computers or other assistive technology	38.3	25.5	19.1	10.6	6.4	31.9	19.1	40.4	8.5
Work independently	48.9	29.8	14.9	6.4	0	55.3	10.6	29.8	4.3
Perform assessment skills for data collection/grading	46.8	36.2	12.8	4.3	0	42.6	19.1	38.3	0
Take a test	59.6	25.5	8.5	4.3	2.1	61.7	6.4	23.4	8.5
Practice skills in different setting	38.3	31.9	21.3	8.5	0	36.2	17.0	46.8	0
Practice skills with a variety of similar materials	25.5	38.3	27.7	6.4	2.1	27.7	14.9	57.4	0
Engage in read aloud activities	44.7	21.3	21.3	10.6	2.1	48.9	10.6	38.3	2.1
View multi media presentations	40.4	25.5	23.4	6.4	4.3	44.7	19.1	29.8	6.4
Engage in speech or presentation	63.8	19.1	17.0	0	0	63.8	10.6	25.5	0
Use work center	59.6	21.3	14.9	2.1	2.1	57.4	14.9	27.7	0
Learn/demonstrate skills in repeated opportunity/direct instruction trials	27.7	31.9	25.5	12.8	2.1	31.9	10.6	57.4	0

* Rated only for target students who received little, some, moderate, or considerable instruction using this method

Table S.3. Percent of Teachers Using Various Resources to Teach Science (N = 55)

	Used to teach Science
Materials	
Commercially made materials adapted (by you or someone else) from general education	78.2
Commercially made manipulatives adapted (by you or someone else) from general education	65.5
Age-appropriate, commercially made print or text materials <i>designed for this type of student</i>	52.7
Age-appropriate, commercially made manipulatives <i>designed for this type of student</i>	50.9
Other commercially made print or text materials <i>designed for this type of student</i>	34.5
Other commercially made age-appropriate manipulatives <i>designed for this type of student</i>	38.2
Teacher-made books, workbooks, materials	80.0
Teacher-made manipulatives	80.0
Materials or lessons from websites	74.5
Computer	67.3
Assistive technologies (e.g., CheapTalk, Big Mac, Dynavox, text reader, talking calculator, etc.)	54.5
Settings	
Real life or natural setting materials (e.g., coins, community signs, telephones)	69.1
Inclusive class setting	41.8
Other settings in my school	50.9
Other settings in the community	45.5
People	
Nondisabled peers	27.3
Teachers from other disciplines (e.g., academic or special subject areas)	40.0
Another staff member at the school (e.g., speech/occupational/physical therapist)	38.2
Other special education teachers	41.8

Table S.4. Teacher-Reported Influences on Science Instruction (N = 55)

	No influence	Minimal influence	Moderate influence	Strong influence
State curriculum framework or content standards	17.0	17.0	28.3	37.7
Instructional materials	7.5	11.3	37.7	43.4
State alternate assessment requirements	9.4	15.1	15.1	60.4
State alternate assessment results from previous years	35.3	19.6	21.6	23.5
National science standards	37.7	39.6	13.2	9.4
Science content, materials, and/or activities used by general education teachers in my school	30.2	13.2	39.6	17.0
Training from my degree program (undergraduate or graduate)	30.2	28.3	24.5	17.0
Students' needs as documented on IEPs	9.4	3.8	11.3	75.5
School or district initiatives or priorities	20.8	24.5	26.4	28.3
Principal or other administrator expectations	22.6	26.4	26.4	24.5
Professional development experiences	24.5	20.8	35.8	18.9
Classroom assessment results	9.6	13.5	25.0	51.9

Table S.5. Percent Reporting Frequency of Use of Classroom Assessments – Science (N = 55)

	Not at all	< 1 time per month	1-4 times a month	1-4 times a week	> 4 times a week
Objective questions (e.g., true/false, multiple choice, yes/no)	18.2	14.5	18.2	32.7	16.4
Performance on-demand (e.g., task analysis steps, repeated trials, incidence recording)	12.7	5.5	25.5	36.4	20.0
Teacher observation (e.g., anecdotal or descriptive data)	9.1	5.5	16.4	32.7	36.4

CIS Results: Long Version

LONG VERSION: FACILITATOR RESPONSES

Twenty-two facilitators completed the long version of the CIS in June 2007. While they were instructed to complete the surveys based on the instructional practices of the “typical” teacher they worked with in 2006-07 and then identify any additional content taught by their “best” teacher, respondents did not differentiate between “typical” and “best” teachers. Therefore, the following results are intended to reflect a sample of the academic instruction of the “typical” teachers, as seen by facilitators.

Detailed tables providing frequency distributions for content within each academic subject and topic are provided in the appendix following this summary. In both the appendix and the summary tables that follow, two kinds of information are provided:

- The “intensity” column provides a rough estimate of the frequency with which the content was taught, across teachers. Responses on the 0-4 scale were summed across the 22 facilitator responses, yielding a total possible score of 88 per item (which would mean all “typical” teachers taught the content systematically, with daily or nearly daily coverage throughout the entire school year). A score of zero would mean that all of the responding facilitators indicated that no “typical” teacher taught that content during 2006-07. In the summary tables that follow on the next three pages, the maximum possible intensity score varies depending on the number of items within the topic. More detailed information about intensity is provided within the appendix tables.
- The remaining columns provide a frequency distribution with which each item was endorsed, at each level of depth of knowledge (DOK).

Following is a list of highlights from the survey responses for each subject.

English language arts (ELA)

- The areas with the greatest instructional emphases were Vocabulary and Concept Development; Questioning, Listening, and Contributing; Beginning Reading; and Discussion.
- Evaluating Writing and Presentations and Style and Language were the topics with the least instructional emphasis.
- There were no clear patterns related to differences across topics in performance expectations (DOK) at which facilitators reported the teachers typically taught. In general, the analysis/synthesis/evaluation level was least frequently endorsed.

Intensity and Distribution of DOK for Content Taught within ELA Topics

	Int*	Attention		Mem/Rec		Perform		Compre- hension		Application		An/Syn/Eval	
		n	%	n	%	n	%	n	%	n	%	n	%
Discussion	55	13	23.6	1	1.8	29	52.7	5	9.1	5	9.1	2	3.6
Questioning, Listening and Contributing	58	5	8.6	7	12.1	26	44.8	10	17.2	9	15.5	1	1.7
Oral Presentation	40	2	5.0	3	7.5	28	70.0	3	7.5	3	7.5	1	2.5
Vocabulary and Concept Development	60	5	8.3	20	33.3	22	36.7	6	10.0	7	11.7	0	0.0
Structure & Origins of Modern English	36	7	19.4	3	8.3	19	52.8	3	8.3	4	11.1	0	0.0
Formal and Informal English	43	5	11.6	10	23.3	14	32.6	7	16.3	6	14.0	1	2.3
Beginning Reading	57	4	7.0	8	14.0	32	56.1	7	12.3	6	10.5	0	0.0
Understanding Text	49	8	16.3	10	20.4	11	22.4	9	18.4	6	12.2	5	10.2
Making Connections	30	13	43.3	4	13.3	8	26.7	3	10.0	1	3.3	1	3.3
Genre	29	9	31.0	5	17.2	7	24.1	6	20.7	2	6.9	0	0.0
Theme	32	6	18.8	8	25.0	11	34.4	6	18.8	0	0.0	1	3.1
Fiction	45	2	4.4	11	24.4	17	37.8	11	24.4	2	4.4	2	4.4
Nonfiction	38	3	7.9	17	44.7	5	13.2	11	28.9	0	0.0	2	5.3
Poetry	28	16	57.1	3	10.7	9	32.1	0	0.0	0	0.0	0	0.0
Style and Language	9	6	66.7	0	0.0	0	0.0	0	0.0	2	22.2	1	11.1
Myth, Traditional Narrative, and Classical Literature	17	7	41.2	3	17.6	1	5.9	3	17.6	3	17.6	0	0.0
Dramatic Literature	21	6	28.6	7	33.3	2	9.5	1	4.8	4	19.0	1	4.8
Dramatic Reading and Performance	17	0	0.0	6	35.3	5	29.4	0	0.0	5	29.4	1	5.9
Writing	24	2	8.3	8	33.3	5	20.8	2	8.3	5	20.8	2	8.3
Consideration of Audience and Purpose	19	4	21.1	7	36.8	0	0.0	1	5.3	6	31.6	1	5.3
Revising	24	0	0.0	7	29.2	5	20.8	0	0.0	12	50.0	0	0.0
Standard English Conventions	39	3	7.7	17	43.6	7	17.9	2	5.1	8	20.5	2	5.1
Organizing Ideas in Writing	16	7	43.8	2	12.5	1	6.3	0	0.0	6	37.5	0	0.0
Research	18	5	27.8	1	5.6	9	50.0	0	0.0	3	16.7	0	0.0
Evaluating Writing and Presentations	8	1	12.5	0	0.0	1	12.5	0	0.0	3	37.5	3	37.5
Analysis of Media	16	1	6.3	2	12.5	5	31.3	0	0.0	3	18.8	5	31.3
Media Production	21	6	28.6	0	0.0	7	33.3	0	0.0	5	23.8	3	14.3

*Int = Intensity

Mathematics

- The areas with the greatest instructional emphases were Numbers and Operations, Measurement, and Characteristics of Geometric Shapes.
- Variables and Change and Probability were the topics with the least instructional emphasis.
- In general, the most frequently reported DOKs were memorize/recall, performance, and application.

	Int.*	N	Attention		Mem/Rec		Perform		Compre- hension		Application		An/Syn/ Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
Numbers & Operations	2009	749	43	5.7	139	18.6	344	45.9	30	4.0	189	25.2	4	0.5
Patterns, relations, and functions	446	165	10	6.1	28	17.0	72	43.6	13	7.9	41	24.8	1	0.6
Algebra	131	66	3	4.5	15	22.7	20	30.3	0	0.0	28	42.4	0	0.0
Relations and mathematical models	208	81	0	0.0	28	34.6	25	30.9	2	2.5	25	30.9	1	1.2
Variable and change	28	18	0	0.0	1	5.6	2	11.1	0	0.0	15	83.3	0	0.0
Characteristics of geometric shapes	531	222	39	17.6	73	32.9	58	26.1	9	4.1	43	19.4	0	0.0
Spatial relationships and coordinate geometry	121	59	18	30.5	12	20.3	10	16.9	3	5.1	16	27.1	0	0.0
Transformation and symmetry	166	88	13	14.8	11	12.5	43	48.9	0	0.0	21	23.9	0	0.0
Visualization/special reasoning/ Geometric modeling	103	47	4	8.5	15	31.9	13	27.7	1	2.1	14	29.8	0	0.0
Measurement	576	220	6	2.7	65	29.5	81	36.8	11	5.0	57	25.9	0	0.0
Data & Statistics	455	191	12	6.3	43	22.5	70	36.6	4	2.1	55	28.8	7	3.7
Probability	95	52	8	15.4	6	11.5	8	15.4	1	1.9	22	42.3	7	13.5

*Int = Intensity

Science

- The areas with the greatest instructional emphases were Life Science and Earth and Space Science.
- History and Nature of Science, and Technology and Engineering were the topics with the least instructional emphasis.
- Science instruction was most frequently provided with expectations for memorization/recall and application levels.

	Int.*	N	Attention		Mem/Rec		Perform		Compre- hension		Application		An/Syn/ Eval	
			n	%	n	%	n	%	n	%	n	%	n	%
Earth and Space Science	826	493	79	16.0	205	41.6	46	9.3	69	14.0	86	17.4	8	1.6
Life Science (Biology)	1025	519	58	11.2	211	40.7	48	9.2	65	12.5	115	22.2	22	4.2
Physical Science and Chemistry	417	234	21	9.0	70	29.9	32	13.7	34	14.5	61	26.1	16	6.8
Technology and Engineering	88	50	10	20.0	8	16.0	9	18.0	6	12.0	17	34.0	0	0.0
History and Nature of Science	55	24	2	8.3	6	25.0	4	16.7	2	8.3	6	25.0	4	16.7
Science as Inquiry	132	58	9	15.5	11	19.0	12	20.7	6	10.3	17	29.3	3	5.2

*Int = Intensity