

ALIGNMENT STUDY FINAL REPORT

**DISTRICT OF COLUMBIA PUBLIC SCHOOLS'
COMPREHENSIVE ASSESSMENT SYSTEM**

ALTERNATE ASSESSMENT (DC CAS- ALT)

**Presented to
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Introduction

In May 2007, the District of Columbia Public Schools (DCPS) Department of Education sponsored a study to review the degree of alignment between the DCPS grade-level content standards and the DCPS Alternate Assessment (DC CAS-Alt) taken by students with significant cognitive disabilities. Specifically, alternate assessment content, administration protocols, and student work samples for two content areas (reading and mathematics) at grades 3-8 and high school were reviewed and analyzed.

The alignment study was designed by the National Center for the Improvement of Educational Assessment (Center for Assessment), applying and in some cases modifying the Links for Academic Learning conceptual framework and coding protocols developed by the National Alternate Assessment Center (NAAC) and the University of North Carolina at Charlotte. A committee of District of Columbia educators representing both general education and special education conducted the alignment study under the guidance of the Center for Assessment. General education experts reviewed the degree of alignment between the content and intended depth of knowledge of the reading and mathematics grade-level content standards and the Entry Points used to guide assessment tasks in the DC CAS-Alt. Special education experts analyzed the content and depth of knowledge of the DC CAS-Alt (the content and instructional tasks that comprise the alternate assessment and actual student work). Secondary coding of over 900 student work samples at all grade levels and surveys related to accessibility, accommodations, scoring protocols, and differentiated expectations across the grade levels were also completed and analyzed as part of this alignment study.

The DC CAS- Alt alignment study was designed to answer these questions:

1. Is the content of the DC CAS- Alt academic, and does it include the major strands of content areas as reflected in DCPS grade-level standards assessed by DC CAS?
2. Is the content of the DC CAS- Alt referenced to the student's assigned grade level (based on chronological age)?
3. Does the focus of achievement maintain fidelity with the content (content centrality) of the original grade level expectations and when possible, the specified performance (performance centrality)?
4. Given that the breadth and range of content and Depth of Knowledge (DOK) of the DC CAS- Alt is expected to differ from general education at corresponding grade levels, are there still high expectations set for students with significant cognitive disabilities?
5. Is there some differentiation in content of the DC CAS- Alt across grade spans?
6. Is the expected achievement for the students to show learning of grade-referenced academic content?
7. Are there potential barriers to demonstrating what students know and can do in the DC CAS- Alt?
8. Does the instructional program for students with significant cognitive disabilities promote learning in the general curriculum?

The District of Columbia Public Schools alternate assessment alignment study is documented at several levels:

Part I:

A General Summary describes some background of the DC CAS- Alt, selection of reviewers, methodology, and overall results of the alignment study. Part I begins with a brief executive summary of findings and explanation of each criterion, which may be unfamiliar to many readers. This section of the report should provide sufficient information for most persons interested in the general process and the overall results of the alignment study.

Part II:

Discussion of Findings and Conclusions contains more detailed information about each criterion reviewed in the alignment study. This information includes tables that summarize information in each of the content areas, by grade or grade span. A narrative provides information about the coding processes, notes any specific related issues, and captures some selected observations and/or comments from the reviewers. This information would be useful to persons interested in understanding specific aspects of the alignment study in greater detail and the underlying rationales for conclusions drawn.

Appendices: Appendices following Part II include samples of coding forms, surveys, and templates, and training materials used by reviewers. It also includes a summary of demographic information about reviewers involved with the study. A detailed Table of Contents is provided at the beginning of these Appendices.

Original Documentation: All raw data, documentation, and initial analyses have been submitted to DCPS. These documents, not included with the final Alignment Study Report, contain detailed information generated by the alignment study, including reviewer ID codes, raw data/coding sheets produced by the content and special education reviewers, as well as the individual demographic information about the reviewers. This documentation, as well as the actual coding sheets with raw data and individual demographic background information, is important as an historical record of this alignment study. Because they contain confidential and individual/personal information, these materials should be restricted to the use of the DCPS Department of Education and those it authorizes.

Additional notes describing any miscoding or incomplete information discovered in examination of the raw data during the data analysis phase that needed to be corrected or reconciled are included with original documentation. This information is important for documenting the analyses and summarization of results from the specific coding sheets to the overall summaries of findings.

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Part I: General Summary

Executive Summary/ Overall Findings of the DCPS Alternate Assessment Alignment Study

This summary briefly describes the conceptual underpinnings, general processes, and overall results of the alignment study. It should provide sufficient information for persons interested in the general methodology and findings for each of the questions investigated. Explanations of each criterion draw heavily from the work of the National Alternate Assessment Center's (NAAC) Links for Academic Learning model (2007), as well as from traditional general education alignment models (Achieve, Inc. and Webb). Analyses of findings and data summaries related to the overall findings in the executive summary can be found in Part II of this report.

Criterion 1: Is the content of the DC CAS- Alt academic, and does it include the major strands of the content areas as reflected in grade-level standards assessed by DC CAS?

The core construct of academic content is not assumed, but instead evaluated as a first step in the alignment process. Academic content has been underrepresented in past instruction and research with students with significant cognitive disabilities. DCPS recognizes that the “extension” of content standards (meaning the DC CAS- Alt Entry Points and required content) may produce assessment targets that sometimes “miss the mark” of being academic - reading or mathematics - even though a deliberate process was used in their development, using the DCPS Grade Level Expectations.

To define “what is academic,” and to determine to what degree the DC CAS- Alt includes academic content, several steps were used by general education content specialists to explore links between Entry Points and DCPS grade-level standards. For this criterion, three grade levels, one at each grade span, were analyzed in depth – grades 4, 7, and 10 in both mathematics and reading. These grade levels were chosen for review because within each grade level there are three sublevels of content complexity (less-moderate-more complex) defined for each Entry Point. Review of the DC CAS- Alt extended standards/Entry Points prior to conducting the study showed that there was understandably some content overlap between adjacent grades; thus, analysis of each grade's three levels of complexity would not yield significant additional insights as to whether or not the content was academic.

Additionally, Pivotal Skills (skills that are not content-specific, such as listening attentively) and Foundational Skills (skills that are *the assumed competence at all grade levels* specific to an academic context, such as orienting a book or turning a page as precursors to learning to read) were identified when addressing Criterion #1.

Findings for Criterion #1:

Identification of Pivotal Skills, Foundational Skills, and academic content provides a unique lens through which to examine the balance of emphasis of targeted skills for assessment across all content areas and grade spans. According to NAAC (2007), “to be

inclusive of students with the most significant disabilities, states sometimes target Foundational Skills for assessment. These skills are commonly embedded in academic instruction and *are important and appropriate* to capture early academic achievement; but these skills are *not* aligned to academic content, because they are outside the construct. Most extended standards (e.g., Entry Points) and assessment tasks/items should be academic, but not necessarily 100%, given the need to include some Foundational Skills to capture early learning. It also would be questionable to assess proficiency based on achievement of Foundational Skills alone.”

The data reveal a high degree of emphasis on assessing academic content in both reading and mathematics at all grade levels in the DC CAS- Alt. This would indicate that teachers are predominantly selecting academic content for portfolio assessment tasks, using their knowledge of student strengths and needs to develop a targeted skill for the student to focus on in each strand.

Identification of Pivotal Skills: While Pivotal Skills may be appropriate and important for instruction, they should not be targeted for the DC CAS- Alt, as they are not considered content-specific. Secondary coding by special education experts indicates that students functioning at pre-symbolic and early symbolic levels can access the 1 Pivotal Skill identified in reading at grade 4; reviewers questioned whether students functioning at pre-symbolic levels could access the 1 Pivotal Skill identified in mathematics.

- **Reading:** One Pivotal Skill was identified by the content experts at the grade 4 level: *4IT-DP6 Locate common signs, symbols, or pictures in the environment.*
- **Mathematics:** One Pivotal Skill was identified by the content experts at the grade 4 level: *4NSO-C20 Sort objects into groups.*

Identification of Foundational Skills: Secondary coding by special education experts indicates that students functioning at early symbolic and pre-symbolic levels can not access the majority of Foundational Skills identified in reading and mathematics, since they require understanding that symbols – letters, words, numbers – represent meaning. It is recommended that all Foundational Skills be reviewed and perhaps revised for greater accessibility for students functioning at early symbolic and pre-symbolic levels.

- **Reading:** A total of eight Foundational Skills were identified in reading. Most Foundational Skills identified at all grade levels related to identifying letters or words in texts. Examples of Foundational Skills identified by content experts in reading included:
 - Grade 4:** *4IT-E1 identify words in an informational text;*
 - Grade 7:** *7LT-G3 Identify words/letters in a grade-level fiction text*
 - Grade 10:** *10LT-F4 Identify words/letters in foreshadowing;*
- **Mathematics:** A larger number of Foundational Skills were identified in mathematics than in reading: at grade 4, ten Foundational Skills; at grade 7, nine Foundational Skills; and at grade 10, eleven Foundational Skills were identified. Most Foundational Skills are variations of “identify numbers...” Some examples of Foundational Skills identified by content experts in mathematics included:
 - Grade 4:** *4NSO-NI Identify numbers;*
 - Grade 7:** *7DASPI Identify numbers in a data set;*
 - Grade 10:** *AI-NI Identify operations*

Table 1.1 (Reading) and Table 1.2 (Mathematics) show the percent of DC CAS- Alt Entry Points identified as academic content or as Foundational or Pivotal Skills at grades 4, 7, and 10 (in left columns). In addition to the in-depth review of Entry Points by content experts, approximately one third of all portfolio work samples (from 2006-07) reviewed from the same grade levels by special education experts were compared to determine to what degree Foundational Skill were selected for assessment. Columns to the right in Tables 1.1 and 1.2 show the percent of Academic or Foundational Entry Points actually assessed in the portfolio work samples reviewed at each representative grade level.

Table 1.1: Summary of Academic Content or Foundational/ Pivotal Skills in Reading				
Reading	DC CAS- Alt Entry Points		Entry Points Assessed in 2006-07 Portfolios <i>Sampled</i>	
Grade Level	Academic Content	Foundational or Pivotal Skills	Academic Content Assessed (portfolio work samples)	Foundational Skills Assessed (portfolio work samples)
4	95%	5%	Lang Dev – 100% Lit Text – 100% Info Text – 82%	Lang Dev – 0% Lit Text – 0% Info Text -18%
7	99%	1%	Lang Dev – 100% Lit Text – 96% Info Text – 100%	Lang Dev – 0% Lit Text – 4% Info Text -0%
10	98%	2%	Lang Dev – 100% Lit Text – 96% Info Text – 96%	Lang Dev – 0% Lit Text – 4% Info Text -4%
Reading Content Strands Lang Dev = Language Development Lit Text = Literary Text Info Text = Informational (Expository) Text				

Table 1.2: Summary of Academic Content or Foundational/Pivotal Skills in Mathematics				
Mathematics	DC CAS- Alt Entry Points		Entry Points Assessed in 2006-07 Portfolios <i>Sampled</i>	
Grade	Academic Content	Foundational or Pivotal Skills	Academic Content Assessed (portfolio work samples)	Foundational Skills Assessed (portfolio work samples)
4	81%	19%	NSO – 88% PRA – 88% M - 88%	NSO – 12% PRA – 12% M – 12%
7	90%	10%	NSO – 100% PRA – 96% DASP - 92%	NSO – 0% PRA – 4% DASP – 8%
10	92%	8%	AI – 92% G – 100%	AI – 8% G – 0%
Mathematics Content Strands NSO = Number Sense & Operations M = Measurement AI = Algebra I PRA = Patterns, Relations, & Algebra DASP = Data Analysis, Statistics, & Probability G = Geometry				

Criterion 2: Is the content of the DC CAS- Alt referenced to the student’s assigned grade level (based on chronological age)?

The alignment study provides feedback on the extent to which DCPS has been successful in referencing the content assessed by the DC CAS- Alt portfolio tasks to specific grade-level academic content. Review of inclusion of the same DC CAS content strands and of changing grade-referenced content across grade levels are considered here. This step is also used as a means to prepare for completing Criterion #3 when content centrality is determined for each Entry Point coded as academic. Skills identified under Criterion #1 as Foundational or Pivotal Skills are not matched to grade-level content, since they are not considered “academic” for the purpose of the alignment study.

Content experts analyzed content descriptions for the three complexity levels (less-moderate-more complex) for each Entry Point, comparing them to the DCPS grade-level standards. The format used for DC CAS- Alt Entry Points (see grade 4 example below) facilitated these analyses, in that it provides both the grade-level standards as written and “the essence and prioritized skills” of each standard with a continuum of possible Entry Points.

Sample Format for DC CAS- Alt Entry Points

Grade 4 Reading			
Learning Standards as written		Essential and Prioritized Skill	
Informational Text	4IT-E1	Identify the purpose and main points of a text and summarize its supporting details.	◆ Identify purpose or main points and summarize supporting details
Less Complex	Possible Entry Points		More Complex
<ul style="list-style-type: none"> ◆ Answer questions of who, what, where, why, or how in relation to a informational text ◆ Identify people in an informational text ◆ Identify words in an informational text 	<ul style="list-style-type: none"> ◆ Identify main point (e.g., Match a cut out of the topic sentence to the topic sentence in the text.) ◆ Identify the purpose (e.g. Choose the purpose from 3 different choices.) ◆ Identify supporting details (e.g., Make an outline of the main idea and supporting details of an informational text.) ◆ Identify the purpose and supporting details of informational text ◆ Identify the main point and supporting details of informational text ◆ Identify critical details, facts, or key events involved in an informational text 		<ul style="list-style-type: none"> ◆ Summarize the main idea and supporting details from an informational text passage (e.g., choose from a list of 3 different summary choices) ◆ Using picture symbols the student will summarize the purpose and supporting details
Possible Entry Points for one grade 4 reading standard are shown here. The highlighted Entry Point under “less complex” was identified as a Foundational Skill under Criterion #1 and is not analyzed any further in the alignment study. Foundational Skills are not considered to be “academic” For the purpose of alignment.			

Findings for Criterion #2:

There is compelling evidence to support the conclusion that the DC CAS- Alt is not promoting a “one size fits all ages” assessment system (meaning that the same Entry Points would apply to all students at all grade levels, which is undesirable).

- The development process and format used by DCPS and ILSSA to create the extended standards/Entry Points has resulted in the overall system being organized by grade level and content strands that are consistent with DC CAS content and content strands.
- The inclusion of both the grade-level standards as written and “the essence and prioritized skills” of each standard ensures that teachers understand the intended learning described in Entry Points for that grade level.
- The approach of organizing content of possible Entry Points by less-to-more complex allows for students functioning at a variety of levels to access learning that is referenced to their grade level.
- Reviewers noted the need to clarify some Entry Points that were not consistently formatted or worded across grade levels, making some analyses more difficult.
- There is strong evidence to show that required content is differentiated across grade levels 3-10 for both reading and mathematics. (More details are provided under Criterion #5.)
- Some of the required content for the DC CAS- Alt is lacking Entry Points. Continued development of the remaining Entry Points is recommended.

Criterion 3: Does the focus of achievement maintain fidelity with the content (content centrality) of the original (DC CAS) grade level expectations and when possible, the specified performance (performance centrality)?

This criterion draws upon alignment processes developed by Achieve (Achieve. Inc.), and is based on a group of experts reaching consensus as to whether the test item and the intended objective(s) correspond fully, partially, or not at all. For this criterion, Entry Points (EPs) in reading and mathematics for grades 4, 7, and 10 were compared to the corresponding grade level standards for content and performance centrality. Content and performance centrality were only considered for Entry Points coded as academic for Criterion #1.

Content Centrality (based on NAAC definitions) is rated using a three-point scale (near, far, none) in which the content experts rate the quality of the content link between the Entry Points and the grade level standard. The goal of content centrality is to have a 100% link (near + far) of grade-referenced content. Percents lower than 100% for content centrality reflect content that has not been identified as Foundational or Pivotal, but is considered a prerequisite skill or mismatch to the standard, so content links are lost between the EP and standard. The information obtained from coding grade-referenced content for Criterion #2 is used to make decisions about the degree of the content link – near/far/none. A strong alternate assessment system is one that expects the content fidelity to remain high.

Performance Centrality (based on NAAC definitions) concerns the expected performance described in the Entry Points. Alternate assessments are expected to allow for an alternate level of performance (meaning not the same as grade level performance in DC CAS general education assessments), due to the difficulty of creating ways for

students who do not yet have fluent use of printed symbols (e.g., words, pictures) to show achievement. Therefore, an EP of “identify” would have some of the same performance expectations as a grade-level standard with “identify and analyze” for the same content, and would be acceptable. Performance centrality is rated on a three-point rating scale (exact match, partial match, no match), using identified Depth of Knowledge levels for grade-level standards and EPs.

Findings for Criterion #3:

Content centrality was found to be very high (95-100%) for both reading and mathematics. Performance centrality shows a range of DOK levels across Entry Points and assessment tasks at all grade levels; however, there are no obvious or consistent patterns for performance centrality findings across grade levels. A closer internal analysis of DOK data by DCPS and ILSSA is recommended to affirm whether the data reflect the balance of emphasis intended in the DC CAS- Alt.

Content Centrality percents reflect the total of near + far links with grade-referenced content.

- **Reading:** Only two Entry Points at grade 4 were coded as “0” or no content link. For example, EP *4LD-V10 match definition/picture with corresponding word is academic and could be a requisite skill to this standard*; however, it is not a content match for the prioritized skill, “analyze the meaning of unfamiliar words using root words and affixes.”
- **Mathematics:** Only one Entry Point at grade 4 was coded as “0” or no content link. EP *4PRA-4 solve addition and subtraction problems, is academic and might be a requisite skill to this standard*; however, it is not a content match for the prioritized skill, “solve problems involving proportional relationships.”
- **Student work samples:** DC CAS-Alt portfolios from 2006-07 were reviewed for content centrality. A total of 451 mathematics tasks and 458 reading tasks were analyzed by special education experts. Depending on the grade level, reading content centrality was impressively high: 89% - 98%; and mathematics content centrality was 87% - 97%.

Performance Centrality percents show the total of exact match + partial match. A wide range of DOK levels were evident and are not only focused on simple recall.

- **Reading:** Most reading EPs not matched at all for performance tended to be because the prioritized skill had a high DOK demand (e.g., *10LT-F5 explain how narrator’s point of view affects tone...*), while the EPs focused only on lower DOK levels (e.g., *identify the tone of the selection; define point of view*, etc.). Non matches for performance centrality were almost always related to “less complex” EPs, while the “moderate” and “more” complex EPs were usually coded as exact or partial matches in performance centrality.
- **Mathematics:** Non matches in mathematics performance often occurred when the prioritized skill was related to problem solving or application of properties and operations (e.g., *10AI-N3 apply ratios, proportions, rates, and percentage*

calculations to solve problems) whereas the corresponding EPs did not (e.g., *identify a ratio; understand that .50=50%*).

Table 3.1 summarizes content and performance centrality for reading and mathematics Entry Points. Since Entry Points tend to be of a smaller grain size than grade-level standards, all EPs for each complexity level (less complex-moderately complex –more complex) were considered collectively to make decisions under Criterion #3.

Table 3.1 Summary of Content and Performance Centrality of DC CAS- Alt Entry Points (Review does not include any Foundational or Pivotal Skills)				
Grade Level	Reading		Mathematics	
	Content Centrality	Performance Centrality	Content Centrality	Performance Centrality
4	95%	68%	95%	58%
7	100%	55%	100%	66%
10	100%	88%	100%	55%

Table 3.2 summarizes *content centrality only* for reading and mathematics portfolio work samples reviewed at each grade level. Each portfolio task was considered individually to determine the degree of content centrality with the teacher-selected Entry Point. At all grade levels, more tasks were coded as full content matches than as partial or no content match.

Table 3.2 Summary of Content Centrality of DC CAS- Alt Portfolio Work Samples				
Grade Level	Reading		Mathematics	
	Number of work samples reviewed	Content Centrality	Number of work samples reviewed	Content Centrality
3	63	95%	60	95%
4	48	98%	48	94%
5	62	89%	63	97%
6	66	95%	63	95%
7	68	93%	67	87%
8	83	90%	84	94%
10	68	94%	66	94%

Criterion 4: Given that the breadth and range of content and Depth of Knowledge (DOK) of the DC CAS- Alt is expected to differ from general education at corresponding grade levels, are there still high expectations set for students with significant cognitive disabilities?

Criterion #4 applies the work of Norman Webb’s Alignment Protocols for categorical concurrence, balance of representation, and range and depth of knowledge (DOK). Content specialists identified DOK levels for all Entry Points, using “modified” Bloom’s Taxonomy definitions for Depth of Knowledge levels established by NAAC for alternate assessment. DC CAS Test blueprints (DC CAS strands targeted for assessment and

required content) served to define categorical concurrence and comparisons of balance of representation with the DC CAS- Alt.

Findings for Criterion #4:

Depth of Knowledge

- Reading:** While the majority of reading Entry Points at the three grade levels reviewed (Table 4.1R) were identified as DOK 2 (recall), there is also a wide range of DOK levels intended to be sampled. Reading work samples across all grades (Table 4.2R) also revealed a wide range of DOK levels targeted for assessment, meaning portfolio tasks were targeted for DOK 1 (attention) through DOK 6 (analysis, synthesis, or evaluation).

Table 4.1R Range of DOK for Reading <i>Entry Points</i>: Percent of Reading Entry Points Intended to Sample each DOK Level						
Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
4	0%	69%	9%	<1%	14%	7%
7	0%	47%	7%	14%	16%	16%
10	0%	29%	11%	23%	16%	21%

Table 4.2R Range of DOK for Reading <i>Using Student Work Samples</i>: Number of Work Samples/Assessment Tasks Addressing Each DOK Level						
Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
3	0	1	42	8	1	10
4	3	31	4	4	7	5
5	4	39	1	9	4	4
6	4	49	9	19	10	0
7	0	24	14	23	4	6
8	0	41	3	23	14	3
10	0	17	5	17	4	23
TOTALS	11	202	78	103	44	51

- Mathematics:** As with reading, the majority of mathematics Entry Points at the three grade levels reviewed (Table 4.1M) were identified as DOK 2 (recall) with a shift towards more DOK 5 and 6 levels at the upper grade levels. Mathematics also showed a wide range of DOK levels addressed in portfolio work samples across all grades (Table 4.2M), meaning portfolio tasks were targeted for DOK 1 (attention) through DOK 6 (analysis, synthesis, or evaluation) and did not only focus on basic recall.

Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
4	0%	55%	18%	0%	20%	7%
7	0%	32%	6%	9%	31%	22%
10	0%	34%	10%	4%	34%	18%

Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
3	2	37	16	0	6	1
4	3	24	6	2	12	11
5	3	35	7	0	14	6
6	0	0	12	44	7	24
7	0	16	16	9	15	13
8	3	17	20	6	20	13
10	0	8	24	4	21	8
TOTALS	11	137	101	65	95	76

Categorical Concurrence

The Categorical Concurrence criterion provides a very general indication of alignment if both the standards and assessment incorporate the same content. The criterion of Categorical Concurrence is met if the same or consistent categories/major strands of content appear in both. For the purpose of this study, the range and balance of the DC CAS- Alt is compared to the state’s priorities for DC CAS, with consideration given to *some coverage in all major strands of content*. Content strands identified in the DC CAS- Alt blueprint and required content were compared to the state’s priorities for the DC CAS and required content in the DC CAS test blueprint (Table 4.3).

- **Reading:** Three major strands are assessed in both the DC CAS and DC CAS-Alt: Language Development, Literary Text, and Informational (expository) Text.
- **Mathematics:** Five major strands are assessed in the DC CAS: Number Sense & Operations; Patterns, Relations, & Algebra; Geometry; Measurement; and Data, Probability, & Statistics. The DC CAS- Alt blueprint requires 3 of the 5 major strands to be assessed each year, with Number Sense & Operations and Patterns, Relations, & Algebra as two of the strands sampled at all grade levels. The other strands are alternated across grade levels to ensure that the remaining strands -

Geometry; Measurement; and Data, Probability, & Statistics – are included for instruction and assessment with intent across grade levels.

Grade	Reading	Mathematics
3	100% of DC CAS reading strands	60% of DC CAS mathematics strands
4	100% of DC CAS reading strands	60% of DC CAS mathematics strands
5	100% of DC CAS reading strands	60% of DC CAS mathematics strands
6	100% of DC CAS reading strands	60% of DC CAS mathematics strands
7	100% of DC CAS reading strands	60% of DC CAS mathematics strands
8	100% of DC CAS reading strands	60% of DC CAS mathematics strands
10	100% of DC CAS reading strands	100% of DC CAS mathematics strands*

* At grade 10, any of the five mathematics strands have the potential to be assessed with the DC-CAS Alt, although each student is only assessed on 3 strands.

Balance of Representation and Range of Knowledge

In addition to comparable depth and breadth of knowledge, aligned standards and assessments require that assessment of knowledge (content and skills) be distributed with intent. The Balance of Representation criterion is used to indicate the degree to which one standard/objective is given more emphasis on the alternate assessment than another.

The *DC CAS-Alt Revised Technical Manual* (2006) indicates that changes were made to the test blueprint for the 2006-07 school year in order to improve the Balance of Representation and Range of Knowledge. These changes were documented during the study and have resulted in stronger validity of the DC CAS-Alt.

- **Reading:** The DC CAS-Alt blueprint places equal emphasis on the three major reading strands at all grade levels, requiring one assessment focus for each strand. All grade-level content required for the DC CAS-Alt is also assessed in the general education DC CAS in reading.
- **Mathematics:** The DC CAS- Alt blueprint places emphasis on three of the five major mathematics strands at each grade level, requiring one assessment focus for each required strand. Number Sense & Operations and Patterns, Relations, & Algebra have slightly more emphasis, because they are sampled at all grade levels. The strands of Geometry, Measurement, and Data, Probability & Statistics are alternated across grades. All grade-level content required for the DC CAS-Alt is also assessed in the general education DC CAS in mathematics.

Criterion 5: Is there some differentiation in content of the DC CAS- Alt across grade spans?

Criterion #5 captures whether the achievement level standards and required content for assessment tasks show changing expectations over time and are age appropriate. For example, students may learn to recognize and use coins in elementary school, but there should be some change in expectation by middle and secondary levels (e.g., using dollars,

recognizing prices, etc.). Extending standards for access with students with significant cognitive disabilities *should not lead to achievement (meaning instruction and assessment) of the same academic skills year after year.*

For this criterion, content experts identified how the content of Entry Points is differentiated from grade to grade. Reviewers examined and compared required content for the DC CAS-Alt across grades 3 through 10. Breadth, depth, and “new” content descriptions were considered in this review and examples documented. Content differentiation decisions were based on descriptions recommended by NAAC.

Content Differentiation across grades should show evidence of some...
Increasing breadth of content (e.g., broader application of target skill such as expanding the types of graphic displays of data used in mathematics or using more features of text – index, captions, subheadings, etc.)
Increasing depth of content (e.g., deeper mastery of target skill, such as going beyond basic recall to interpretation or analysis or to more complex/abstract content)
New content introduced (e.g., content not covered in prior grade, such as new strands of content or content more appropriate for older learners)

Special education experts coded work samples for differentiation across grade levels and for age appropriateness of assessment tasks. Age-appropriateness decisions were based on descriptions recommended by NAAC.

Age-Appropriateness Coding Descriptions for Structured Performance Tasks (NAAC)
1- Adapted from grade level content (e.g., Roll of Thunder, Hear My Cry)
2- Not grade specific; neutral; themes are appropriate for all ages (e.g., pets)
3- Inappropriate for teens (e.g., circus)
4- Inappropriate even for elementary age (e.g., Barney)

The Center for Assessment staff analyzed draft (April 2007) DCPS alternate achievement level standards for each grade level and content area. Differences between performance levels at each grade span, as well as differences across grade spans, were examined using NAAC guidelines.

Findings for Criterion #5:

Content Experts identified strong evidence to support that *some* Entry Points and required content is differentiated across grade levels 3-10 for both reading (Table 5.1) and mathematics (Table 5.2).

Table 5.1 Reading Entry Points Content Differentiation Grade-by-Grade						
Evidence of SOME...	Grade 3 to 4	Grade 4 to 5	Grade 5 to 6	Grade 6 to 7	Grade 7 to 8	Grade 8 to 10
Increasing breadth of content		YES		YES	YES	YES
Increasing depth of content	YES		YES	YES	YES	YES
New content introduced	YES	YES	YES	YES	YES	YES

Table 5.2 Mathematics Entry Points Content Differentiation Grade-by-Grade						
Evidence of SOME...	Grade 3 to 4	Grade 4 to 5	Grade 5 to 6	Grade 6 to 7	Grade 7 to 8	Grade 8 to 10
Increasing breadth of content	YES	YES	YES	YES	YES	YES
Increasing depth of content	YES	YES	YES	YES	YES	YES
New content introduced	YES	YES	YES	YES	YES	YES

Age-appropriateness was reviewed for all student work samples. In both content areas, and across all grade levels, almost 100% of the assessment contexts were identified as appropriate for the age of students. Only one of the more than 900 pieces of student reviewed was coded as “inappropriate for teens. This was a reading assessment at the grade 5 level.

Achievement Level Standards (Achievement Level Descriptors)

DCPS Achievement Level Standards address 4 performance levels: Advanced, Proficient, Basic, and Below Basic. A strength of these descriptors is that differences in achievement level descriptors at each grade level are articulated in terms of the grade-referenced content knowledge and skills for content strands. Differences in performance expectations between performance levels within one grade level and differences across adjacent grades were clear in terms of content identified, especially between the Basic and Proficient levels, even though there is understandably much content overlap. Additional specific findings related to strengths of the DCPS Achievement Level Standards are discussed in more detail under Criterion #6.

Criterion 6: Is the expected achievement for the students to show learning of grade-referenced academic content?

States’ alternate achievement standards must link to grade level content. This means that what is actually counted toward a score that will be classified as “proficient” should evidence learning of the academic content and include scoring for accuracy. Scoring rubrics, the DC CAS-Alt administration and technical manuals, and Achievement Level Standards were analyzed for information related to how inferences are made about student learning.

Findings for Criterion #6:

This discussion focuses on Achievement Level Standards and scoring protocols used in the DC CAS-Alt. Using NAAC guidelines, the special education experts’ review of scoring protocols looked for indicators with the potential to make high inferences that the student had learned the grade-level content.

The strongest indicators identified in DCPS scoring protocols and Alternate Assessment Achievement Level Standards for having the potential to make high inferences about student learning were:

- Inclusion of *separate* measures for accuracy and independence, so that each may be considered when making inferences about progress and learning;
- Depending on how assessment tasks are designed by teachers, they *have the potential* for demonstrating generalization across people or settings when/if contexts are varied for each of the three data collections;
- Differences in content strands assessed, required content, and Entry Points at each grade level indicate that new content (meaning teacher selection of different/new content) is targeted for assessment at each grade level;
- Multiple data collections (3-5 pieces for each of 3 content entries) provide a baseline against which progress can be measured;
- Inclusion of consideration of level of complexity of task in scoring; and
- Program quality indicators are **not** included with student's score or with Achievement Level Standards.

Criterion 7: Are there potential barriers to demonstrating what students know and can do in the DC CAS- Alt?

Source of Challenge is often included as a criterion for alignment studies (Achieve, Inc.). For the purpose of this study, Source of Challenge is being defined as “potential barriers” to demonstrating learning. Because of the complex disabilities that students in this population sometimes have, it can be difficult to demonstrate achievement. This is especially true if the only means to show learning is through symbolic representation, such as using words and pictures. Consideration also needs to be given to know how students with a variety of sensory and physical challenges can both access the test materials and demonstrate their learning. Accommodations allow greater access, but do not change the construct being assessed (e.g., a scribe might write words the student dictates); modifications are changes that are likely to alter the construct being assessed.

Special education experts completed a survey, *Minimizing Barriers for Students*, after a review of the DC CAS-Alt administration manual guidelines related to accommodations, modifications, and scoring protocols for both content areas.

Findings for Criterion #7:

Source of Challenge

The DC CAS-Alt represents a multi-disciplinary approach to assessing student learning, access to the district and grade level learning standards, and varied opportunities to learn. One strength of the DC CAS-Alt is its flexibility in teacher-designed assessment tasks to meet the individual needs of students with significant cognitive disabilities. There was agreement among the special education reviewers for Criterion # 7 that the administration manual provides clear guidance for accommodations and modifications when designing assessment tasks, so that students can demonstrate what they have learned through a

variety of response modes. Administration guidelines were found to be consistent across content areas and provided flexibility for all examples of disabilities included on the survey (e.g., visually impaired/legally blind; hearing impaired; nonverbal – responds using printed words, pictures, manual signs, etc.).

Criterion 8: Does the instructional program for students with significant cognitive disabilities promote learning in the general curriculum?

Instructional alignment is especially important given the conceptual shift many educators must make to teach this population content that links to grade level standards. For this criterion, consideration is also given to whether professional development materials link to general education expectations and promote overall program quality. The professional development review identifies how well the training materials provided to teachers of students with significant cognitive disabilities include information regarding academic content and best instructional practices for this population. To gather data for this criterion, special education experts completed a NAAC survey –*Program Quality Indicators*. Center for Assessment staff reviewed a sampling of current professional development materials and interviewed ILSSA staff about on-going professional development opportunities that support implementation of the DC CAS-Alt.

Findings for Criterion #8:

Information about instructional programs and professional development support is not required by NCLB and was collected by DCPS for internal analysis, discussion, and future planning only. For this reason, and because the sampling of special education teachers was small, no summary of findings for the surveys related to Criterion 8 is included in this report. Part II of this report does identify some potential issues to be addressed through ongoing professional development provided by DCPS and ILSSA.

Current Professional Development and Instructional Support

- The Inclusive Large-Scale Standards and Assessment group (ILSSA) has developed and provided on-going training opportunities to support special education teachers in developing both curriculum and instruction for students with severe cognitive disabilities. Technical assistance has taken many forms – from large-group/whole school support to individual targeted assistance in reviewing student work and documenting data collection.
- Scoring academy trainings, led by ILSSA staff, have been credited for expanding the expertise of special educators across the district in implementing effective curriculum and instruction for this population of students.
- The *District of Columbia Alternate Assessment Portfolio Revised Teachers' Guide* provides many examples and links to general education expectations as a guide to teaching and assessing grade-referenced content.
- DCPS is to be commended for these ongoing efforts in supporting teaching and learning of students with severe disabilities. It is recommended that this support to teachers continue in order to reach each educator working with the DC CAS-Alt,

as well to expand the reading and mathematics content knowledge and instructional skills of special education teachers.

Background¹

The DC CAS-Alt Portfolio

The DCPS Alternate Assessment process was developed by the Alternate Assessment Core Team in response to the requirements of the Individuals with Disabilities Education Act (IDEA) 1997. Revisions in the DCPS Alternate Assessment were made in response to the No Child Left Behind Act and the reauthorization of IDEA 2004 and renamed the District of Columbia Comprehensive Assessment System Alternate Assessment (DC CAS-Alt). As in previous years, the revised 2006-07 DC CAS-Alt portfolio consists of a body of evidence compiled during the school year in a portfolio that documents the student's performance.

After consideration of other assessment formats, it was determined that the body of evidence approach was assistive to teachers in their practice, and with revision to some aspects of the system, meets the rigorous technical quality requirements specified in NCLB. The DC CAS-Alt represents a multi-disciplinary approach to assessing student learning, access and progress toward the district learning standards, and opportunities to learn. The DC CAS-Alt is a portfolio assessment that effectively links grade level learning standards, instruction, and assessment.

Proposed changes to the DC CAS-Alt for 2006-2007 centered primarily on increasing the number of grade-level strands assessed and refining the scoring and reporting systems. As well, it was important to re-examine the design of the DC CAS-Alt in light of changes in purposes and uses since its design in 1997 to reflect both IDEA and NCLB's greater emphasis on grade level access and understanding of technical aspects of alternate assessment systems. **The June 29, 2006 Peer Review letter requested evidence for the following DC CA-Alt features:**

1. Formal adoption of cut scores and alternate achievement level descriptors for the DC CAS-Alt in English Language Arts and Mathematics for all grades assessed.
2. Results from a completed external alignment study for the DC CAS-Alt or other data confirming the alignment of the DC CAS-Alt with grade-level content standards.
3. Revised guidelines for participation in the DC CAS-Alt that clearly state that this assessment is restricted to students with the most significant disabilities.

During the July 6, 2006 meeting of the DC TAC, committee members made the following recommendations.

1. Expand the number of content strands addressed.
2. Emphasize performance dimensions over program dimensions.
3. Improve the validity and reliability of the DC CAS-Alt.

¹ The background and results of the alignment study have been selected and condensed for this summary.

4. Make revisions to the systems that are more in line with the latest reauthorizations of NCLB and IDEA in terms of use and purpose.

Development of Grade-Level Entry Points

The DC CAS-Alt Entry Points are a set of possible outcomes or methods for students with special needs that are aligned to the general education content standards, with a modified level of difficulty, breadth, or depth. They follow an ILSSA-developed process for unpacking general education standards and illustrate for teachers not only the essence of the standard, but also several pathways for teaching students with significant cognitive disabilities this content. The entry points are a teaching tool educators may use to fine tune their grade-level aligned targeted skills or to think about ways students can gain access to the grade level standards. Since the development of entry points, special education teachers and general education content people have been asked to review them and provide feedback to DCPS and ILSSA about their use in aligning grade-level content for instruction and assessment.

These “entry points” to the standard are on a continuum from less to more complex. This continuum varies, based on the level of Revised Bloom’s Taxonomy that the general education content standard accesses. For instance, if the general education standard asks the students to “analyze,” then the most complex entry point illustrates a way for students to analyze while modifying the breadth, depth, and difficulty of the standard. The less complex entry points will fall lower on the Revised Bloom’s Taxonomy (e.g., asking the student to demonstrate “identify” or “understanding”). Teachers can use these entry points to develop targeted skills and activities for the general education curriculum. Entry points also provide some common strategies for students with severe cognitive disabilities to access curriculum (e.g., objects, templates, matching, task analysis, etc.).

Materials and Reviewers

Documents and Interviews

Data were collected using document analysis (outside reviewers, as well as Center for Assessment staff) and interviews with ILSSA and DCPS staff most familiar with the alternate assessment. The Center for Assessment interviewed key Department staff from the DCPS Office of Educational Accountability and Assessment as part of the planning process, prior to designing the alignment study. Interview questions were intended to help clarify/explain the documents, DC’s alternate assessment guidelines and procedures (e.g., scoring of student work), and related policies.

Documents used to inform data collection included:

1. Documentation of development of the District of Columbia’s Alternate Assessment (procedures and rationales used to develop the DC CAS-Alt)
2. Procedures used for developing grade-specific entry points/extended standards that guide decisions about the instructional content assessed in the DC CAS-Alt

3. Content-specific entry points for all grade levels 3-10
4. The *DC CAS-Alt Teachers' Manual* (including participation guidelines for the DC CAS-Alt, portfolio assessment evidence requirements for each grade span, allowable accommodations/modifications, and the DC CAS-Alt blueprint for each grade span)
5. Samples of student work from the most current (2006-2007) DC CAS-Alt for grades 3, 4, 5, 6, 7, 8, and 10 for each content area – approximately one third of all student portfolios at each grade level, with 6 work samples each
6. Information about scoring the alternate assessment, including the scoring rubrics for performance (accuracy) and supports (independence), and administration guidelines for teacher assistance/support
7. *DC CAS-Alt draft (2007) Technical Manual* (including technical information about alternate achievement standards, performance descriptors, validity and reliability studies, standard setting, etc.)
8. The current draft (2007) of the DC CAS-Alt Achievement Level Standards
9. The DC CAS general education test blueprint (showing Balance of Representation, Range of Knowledge, etc.)
10. General education grade-level content standards for reading and mathematics, grades 3-high school
11. Sampling of professional development materials related to implementation of the DC CAS-Alt

While the use of some documents is self evident, others are included in the process as a way to understand the assessment system and values of the state regarding content, instruction, and assessment of students with significant cognitive disabilities. The DC CAS-Alt Teachers' Manual and grade-level content standards provided the alignment teams (general education content and special education reviewers) essential information on the prioritized content areas of DC CAS-Alt.

Data and Coding Forms

Data were compiled for analysis using reviewer responses and coding. Coding templates and surveys were used to capture the necessary information (e.g., academic content, DOK, content and performance centrality) from the reviewers. Unique identifiers for the information listed (e.g., distinctive codes, grade levels, etc.) were used on the forms for clarity whenever possible. Content experts and special education experts completed different tasks, using forms focusing on different aspects of the DC CAS-Alt. All coding forms and surveys were color-coded by content area (to avoid reviewer confusion).

The Center for Assessment operationalized the level of specificity of the coding for all of the documents and materials used in the review and provided examples and guidelines for coding. Decisions about how to document each response and examples and non-examples were included a Codebook (Appendix B.3) provided to each reviewer.

Coding forms and surveys were developed and pilot tested by the Center for Assessment, prior to the study, to develop training examples and ensure a smooth data collection

process. An overview of the forms and documents used by the reviewers for each criterion is summarized at the end of this section.

Reviewers

The District of Columbia Department of Education recruited educators to participate in the alignment study. All reviewers self-identified a content area of expertise (reading or mathematics), so that content-specific work groups could be formed for both general education and special education. Individual demographic information was collected (Appendix A.1) from each reviewer and rater identification numbers were assigned for coding and confidentiality purposes. A summary of reviewer demographics is included in Appendices A. 2 (Content Experts) and A.3 (Special Education Experts).

ILSSA staff provided all reviewers with an overview of the development of the DC CAS-Alt, requirements for data collection, and use of Entry Points and grade-level standards to design instructional tasks for the DC CAS-Alt portfolio; the National Center for Assessment instructed reviewers on the purpose for the alignment study, as well as general policies (e.g., confidentiality, roles) and procedures for coding. A Codebook developed by the Center for Assessment, with support from NAAC, provided training examples and non-examples for each criterion reviewed and detailed information for each step in the alignment study process.

Content experts and special education experts received in-depth training on task-specific coding as appropriate. For example, special education reviewers received training specifically on the DC CAS-Alt Teachers' Manual and coding of assessment tasks for accessibility; content experts were trained in how to determine a "content match" between content standards and the DC CAS-Alt Entry Points.

The reviewers generally worked in teams of two or more persons, organized by content area, to review each grade's materials. Content experts work separately from special education experts for most tasks, as recommended in the NAAC model. Working together to make coding decisions, the teams' codings reflect consensus on their ratings and comments.

Reviewers were supported by ILSSA and DCPS staff from the Office of Educational Accountability and Assessment, providing: logistical support, such as preparing documents, coding templates, and training materials for the review; and making presentations related to the DC CAS-Alt development and administration requirements. The ILSSA and DCPS professional staffs were available to provide clarification about DC CAS-Alt and any administration procedures, but did not participate in the alignment study discussions or coding.

Alignment Study Design and Procedures

The alignment study, designed by the Center for Assessment, is intended to evaluate the correspondence between the District of Columbia's grade-level content standards and test specifications (DC CAS) and assessment tasks for the DC CAS-Alt (e.g., content, balance

of emphasis, performance centrality, etc.). The study’s design and methods apply (and in some cases adapt) the Links for Academic Learning conceptual framework and coding protocols developed by the National Alternate Assessment Center (NAAC). Eight criteria recommended by NAAC, as well as applications drawn from traditional general education alignment models (Achieve, Inc. and Webb,) were employed in the design. All coding done by content and special education experts was closely reviewed by Center for Assessment staff, and in some cases needed to be corrected (e.g., incorrect DOK level identified, incorrect totals) and/or completed (e.g., coded information not transferred completely from one form to the next) before final the analyses. Any corrections/changes to raw data were documented and will be kept on file at the DCPS Office of Educational Accountability and Assessment.

The study consists of multi-layered analyses that focus on these alignment criteria:

- Criterion 1:** The Content is Academic
- Criterion 2:** Content is Referenced by Grade Level
- Criterion 3:** Fidelity with Grade Content and Performance Level
- Criterion 4:** The Content Differs in Range, Balance, and Depth of Knowledge (DOK)
- Criterion 5:** Differentiation across Grade Spans
- Criterion 6:** Expected Achievement of Students is Grade-Referenced Academic Content
- Criterion 7:** Barriers to Performance
- Criterion 8:** Instructional Quality

Reviewers, divided into two groups – content experts and special education experts – met on different days, and were assigned different roles and responsibilities, based on their areas of expertise.

Content experts investigated most of the information related to the first four alignment criteria for all grade spans and content areas, using content analysis and coding. This included an in-depth analysis of content Entry Points at three grade levels and their alignment with DCPS grade-level content standards.

Special educators have insight into the characteristics of the student population, as well as best instructional practice; therefore, their role in the alignment study process was unique. Their coding responsibilities included such things as: rating the age/grade appropriateness of assessment tasks; coding the specific symbolic level of those items identified by the content experts as Pivotal or Foundational Skills; and reviewing a large sample of student work to determine the degree of alignment to grade-referenced content.

DCPS Alternate Assessment Alignment Study		
Summary of Alignment Criteria, Coding Materials, & Reviewer Responsibilities		
Criterion	Materials needed (in addition to Codebook)	Who measures it?
1) The content is academic and includes the major domains/strands of the content area as reflected in state/NECAP standards	-Content-specific coding templates for reading and mathematics at grades 4, 7, and 10 - DCPS content standards – reading & mathematics at all grade levels (K-HS) - Entry points for reading & mathematics at grades 4, 7, and 10 with any related support materials	Content Experts – split by content area
2) The content is referenced to the student’s assigned grade level (based on chronological age).	(same as above) -Content-specific coding templates: identify grade references between DCPS content standards and extended standards/entry points	Content Experts – split by content area
3) The focus of achievement maintains fidelity with the content of the original grade level standards (content centrality) and when possible, the specified performance (category of knowledge).	(same as above) -Content-specific coding templates: ratings of content centrality -Templates – Foundational and Pivotal (“F” or “P”) -Summary - explain ratings for F/P (either an back-mapping, a mismatch to the standard, or an overstretched skill -student work samples grades 3-10	Content Experts – split by content area Spec Ed Experts – split by content area – review nonacademic content – secondary coding
4) The content differs from grade level in range, balance, and DOK, but matches high expectations set for students with significant cognitive disabilities.	-Content-specific coding templates for reading, and mathematics at grades 4, 7, and 10 -DOK coding templates for entry points -Templates for assessment tasks (admin manual) -student work samples grades 3-10	Content Experts (DOK coding) Spec Ed Experts (requirements, student work)
5) There is some differentiation in CONTENT across grade levels or grade bands.	- Entry points– all grades and content areas -Alternate Assessment Achievement Level Standards by Content and Grade -Age-Appropriateness of Tasks checklist - admin manual – Requirements for portfolio entries across grades and content areas - student work samples grades 3-10	Content Experts (review entry points) Spec Ed Experts (review student work) Center for Assessment (Achievement Level Standards, -DC CAS test blueprint)
6) The expected achievement for students is for students to show learning of grade referenced academic content.	-Alternate Assessment Achievement Level Standards by Content and Grade -Scoring rubrics and protocols - <i>Degree of Inference about Student Learning</i> checklist - <i>Program Quality Indicators</i> survey	Spec Ed Experts Center for Assessment (Achievement Level Standards)
7) The potential barriers to demonstrating what students know and can do are minimized in the assessment.	- <i>Minimizing Barriers for Students</i> survey -Symbolic/Non-symbolic checklist -Admin Manual – accommodations/modifications	Special Ed Experts
8) Does the instructional program students with significant cognitive disabilities promote learning in the general curriculum?	-Admin Manual – accommodations/modifications - PD materials - <i>Program Quality Indicators</i> survey	Spec Ed Experts Center for Assessment

Overview of Each Criterion with Related Coding Procedures

Criterion 1: The Content is Academic

The conceptual foundation for the DC CAS-Alt alignment study builds upon several national alignment models for general and alternate assessment (NAAC, Achieve, Inc. and Webb). The core construct of academic content is not assumed, but instead evaluated as a first step in the process. Because academic content has been underrepresented in past instruction and research with students with significant cognitive disabilities, the “extension” of content standards (meaning the content-specific entry points) may produce assessment targets that can sometimes “miss the mark of being academic – reading or mathematics - even though a deliberate process was used in their development, using the DCPS grade-level content standards as a starting point.

The District of Columbia Public Schools’ grade-level content standards for reading and mathematics have previously undergone an alignment review; therefore, this study begins with the assumption that the DCPS content standards are in alignment with national standards for the content areas of reading and mathematics. To define “what is academic,” and to determine to what degree the DC CAS- Alt includes academic content, several steps will be used to compare District expectations with content entry points and the DC CAS- Alt.

- Content experts, working in 2 content-specific work groups, review each entry point to find the best content match with grade-level content standards at the grade level assessed by the DC CAS- Alt (at grades 4, 7, or 10). Content matches might not be “exact” matches with DCPS content; however, reviewers will use the “content essence” intended to be assessed as a guide in making these decisions. For example, the essence of a reading standard might be “decoding multi-syllabic words” but the examples and range of words included the grade-referenced general education standard could generally be broader in scope and complexity than what is described in the entry point.
- During this first step of the review process, content experts also identify any entry point that would be considered either a Pivotal or Foundational Skill, as defined by NAAC. These skills would be difficult to match with DCPS content because they are either not content specific, although important for learning (e.g. pivotal skill – sitting in a chair) or considered foundational - those skills that are *the assumed competence at all grade levels* specific to an academic context (e.g., orienting a book or turning a page as precursors to learning to reading).
- The identified Pivotal and Foundational Skills then receive a secondary coding from special education experts (as to accessibility). From this point forward, Foundational and Pivotal Skills are not be considered “academic” for the purpose of the alignment study*. Foundational Skills are, however, valued as providing access for those students functioning at awareness, pre-symbolic, or early symbolic levels to show partial achievement or early learning, thus the usefulness of the secondary coding.

***NOTE:** According to NAAC, to be inclusive of students with the most significant disabilities, states sometimes target Foundational Skills for assessment. These skills are commonly embedded in academic instruction and *are important and appropriate* to capture early academic achievement; but these skills are *not* aligned to academic content, because they are outside the construct. Most extended standards and assessment tasks/items should be academic, but not necessarily 100%, given the need to include some Foundational Skills to capture early learning. It also would be questionable to assess proficiency based on achievement of foundational skills alone.

Criterion 2: Referenced by Grade Level

Students with significant cognitive disabilities have often been served in ungraded classes, so thinking about content - by grade level or grade span - can be new for many educators. The extent to which the DCPS have been successful in referencing general education content standards to the content assessed by DC CAS-Alt is the focus of this criterion. Inclusion of the same major content strands, as well as grade-referenced DCPS content, is considered. This step in the alignment process is also used as a means to prepare for completing Criterion #3, when content centrality is determined for each Entry Point/extended standard coded as academic. Skills identified for Criterion #1 as Foundational or Pivotal are not matched to grade level standards, since they are not considered “academic” for the purpose of the alignment study.

Using the same content-specific templates for each grade span as for Criterion #1, content experts review DCPS content from the grade level referenced in the template (grades 4, 7, or 10). For example, raters review descriptions for grade 4 expectations to determine the closeness (near, far, or no match) of the content with the corresponding Entry Points for less complex, moderately complex and more complex.

Summaries for each of the 3 grade level’s in each content area were be totaled to reflect how many content matches were made. Findings were then used to determine content centrality (Criterion #3).

Criterion 3: Fidelity with Grade Content and Performance Level

Extending content and defining performance for the heterogeneous population of students who participate in the DC CAS-Alt is challenging and can produce targets for learning that sometimes “miss the mark.” This criterion draws upon alignment processes developed by Achieve (Achieve. Inc.), and is based on a group of experts reaching consensus on the degree to which the assessment-by-standard mapping conducted by a state or district is valid. For Content Centrality and Performance Centrality, reviewers reach a consensus as to whether the item/task and the intended objective(s) correspond fully, partially, or not at all. For this criterion, entry points are compared to the DCPS grade-level standards for content and performance centrality.

Content centrality (based on NAAC definitions) - rated using a three-point scale (near, far, none) in which the content experts rate the quality of the content link between the DC CAS-Alt entry points and the grade level content; special education experts rate student work samples for fidelity to the standard. For example, an extended standard of *Identify weather conditions* may have no content link to a grade level standard, *Analyze and*

identify types of clouds. An extended standard of *Identify clouds* may be considered a “far” link, because even though it is dealing with clouds, it still does not address the total content domain of the original standard that is types of clouds. A “near” link for an extended standard would be something like, *Identify cumulous and not cumulous clouds*. Information obtained from coding grade-referenced content for Criterion #2 is used to make decisions about the degree of the content link – near/far/none. A strong alternate assessment system is one that expects the content fidelity to remain high.

Performance centrality (based on NAAC definitions) concerns the expected performance of the extended standards. Alternate assessments are expected to allow for an alternate level of performance (meaning not the same as grade level performance in general education assessments), due to the difficulty of creating ways for students who do not yet have fluent use of printed symbols (e.g., words, pictures) to show achievement. Therefore, an extended standard of “identify” would have some of the same performance expectations as a content standard with “analyze and identify” for the same content, and would be acceptable. Performance centrality is rated on a three-point rating scale (exact match, partial match, or no match), using definitions for Depth of Knowledge established for special education by a modified Bloom’s Taxonomy (developed by NAAC). (See discussion of Criterion #4 for more information on coding cognitive complexity.)

Content and performance centrality are only considered for items coded as academic. An item can be academic, but not have content centrality for several reasons. It may be *mismatched* to the wrong grade level standard (e.g., clerical error or miscoded to a different content strand) or, sometimes the targeted content has been *overextended* or “watered down” so that the content link is lost.

Criterion 4: The Content Differs in Range, Balance, and Depth of Knowledge (DOK)

This criterion closely resembles the work of Norman Webb’s Alignment Protocols (1997, 2002). Measures of categorical concurrence, balance of representation, and depth of knowledge (DOK) are addressed under Criterion #4.

Depth of Knowledge (DOK)

The assumption is that the DOK of the DC CAS-Alt and Entry Points should match, but will be skewed to lower DOK levels than the DCPS grade-level standards. This is a key difference between grade level achievement and alternate achievement.

To establish DOK levels of content Entry Points for comparison with related grade-level standards, content experts used a modified version of Bloom’s Taxonomy that combines the 3 highest levels of Bloom’s Taxonomy into one level (analysis, synthesis, and evaluation). The five lower levels include: Application, Comprehension, Performance, Memorization, and Attention. The first three levels of the modified taxonomy reflect some reorganization and extending down of several Bloom levels. Entry points that are too vague for coding are also identified at this point in the study.

“Modified” Bloom’s Taxonomy for alternate assessment alignment studies (developed by NAAC)	
Codes	Depth of Knowledge (DOK)
1	<i>Attention</i> (touch, look, vocalize, respond, attend)
2	<i>Memorize/recall</i> (list, describe (facts), identify, state, define, label, recognize, record, match, recall, relate)
3	<i>Performance</i> (perform, demonstrate, follow, count, locate, read)
4	<i>Comprehension</i> (explain, conclude, group/categorize, restate, review, translate, describe (concepts), paraphrase, infer, summarize, illustrate)
5	<i>Application</i> (compute, organize, collect, apply, classify, construct, solve, use, order, develop, generate, interact with text, implement)
6	<i>Analysis, Synthesis, Evaluation</i> (pattern, analyze, compare, contrast, compose, predict, extend, plan, judge, evaluate, interpret, cause/effect, investigate, examine, distinguish, differentiate, generate)
X	<i>Can’t score/too vague</i>

Categorical concurrence

Norman Webb generally defines acceptable categorical concurrence as an assessment sampling each standard with at least 6 test items. For the purpose of this study, and due to the flexible and variable nature of portfolio-type alternate assessments, NAAC recommends that the range and balance of the alternate assessment be compared to the district’s priorities for large-scale assessment, with consideration given to *some coverage in all major strands of content*.

Criterion 5: Differentiation across Grade Spans

This criterion captures whether the achievement level standards and actual assessment tasks show changing expectations over time and are age appropriate. For example, students may learn to recognize and use coins in elementary school, but there should be some change in expectation by middle and secondary levels (e.g., using dollars, recognizing prices, etc.). Use of extended standards for access with students with significant cognitive disabilities *should not lead to achievement of the same academic skills year after year*.

To address this criterion, content experts reviewed Entry Points for every grade level in order to identify differentiation across grade levels; special education experts examined portfolio tasks and student work samples for differentiation across grades and for age appropriateness of assessments. Surveys asked reviewers to describe each grade’s content and performance in terms of increasing breadth, depth or new content.

Using NAAC guidelines, Center for Assessment staff analyzed the DC CAS-Alt achievement level standards and definitions of proficiency for the alternate assessment,

examining differences between performance levels at each grade span, as well as differences across grade spans and content areas.

Age-appropriateness decisions are based on descriptions recommended by NAAC, as seen in the table below and Codebook. Entry points, sample assessment tasks included in the Teachers' Manual, and student work samples were all reviewed.

Age-Appropriateness Coding Descriptions for Structured Performance Tasks (NAAC)
1- Adapted from grade level content (e.g., Roll of Thunder, Hear My Cry)
2- Not grade specific; neutral; themes are appropriate for all ages (e.g., pets)
3- Inappropriate for teens (e.g., circus)
4- Inappropriate even for elementary age (e.g., Barney)

Criterion 6: Expected Achievement of Students is Grade Referenced Academic Content

What is actually counted toward a score that will be classified as “proficient” should evidence learning of the academic content. Inferences about student learning are more difficult to make when these scores incorporate aspects of teachers or program performance.

Center for Assessment staff analyzed scoring rubrics, Achievement Level Standards, and the DC CAS-Alt draft Technical Manual for information related to how inferences are made about student learning. Using NAAC guidelines (*Degree of Inference about Student Learning* checklist included in Codebook), this review looks for indicators of strongest inference that the student learned the content, including:

- a) there is evidence the student did not already have the skill (e.g., through use of pretest, baseline or previous year's learning);
- b) the skill is performed without teacher prompting;
- c) the skill is performed across materials/lessons to show mastery of the concept versus rote memory of one specific response; and
- d) there is consideration of the difficulty/complexity level of the skills performed.

Criterion 7: Barriers to Performance

Because of the complex disabilities that students in this population sometimes have, it can be difficult to demonstrate achievement. This is especially true if the only means to show learning is through symbolic representation, such as using words and pictures. Consideration also needs to be given to know how students with a variety of sensory and physical challenges can both access the test materials and demonstrate their learning. Accommodations allow greater access, but do not change the construct being assessed (e.g., a scribe might write words the student dictates); modifications are changes that are likely to alter the construct being assessed.

Special education experts completed a NAAC survey, *Minimizing Barriers for Students* (Appendix C.5), after a review of the *DC CAS-Alt Teachers' Manual* guidelines related to accommodations, modifications, and scoring protocols for both content areas.

Criterion 8: Instructional Program Promotes Learning in the General Curriculum

The NAAC model of alignment gives consideration to instructional alignment. This is especially important given the conceptual shift many educators must make to teach this population content that links to grade level standards. For Criterion 8, consideration is also given to whether professional development materials link to DC CAS expectations and promote overall program quality. The professional development review identifies how well the training materials provided to teachers of students with significant cognitive disabilities include information regarding grade-level academic content, assessment information, and best instructional practices for the population.

To gather data for this criterion, special education experts completed a NAAC survey, *Program Quality Indicators* (Appendix C.6). Raters were asked to identify documentation of explicit links to general education expectations. Center for Assessment staff also reviewed a sampling of current/ongoing professional development materials and activities related to implementation of the DC CAS- Alt. The information gleaned from this review was minimal; however will provide DCPS and ILSSA some information for internal discussions and future planning of professional development.

Part II: Discussion of Findings and Conclusions

Results of Alignment Study

Discussion of Findings for Criterion #1:

Analyses for criterion #1 included a detailed review by content experts of all Entry Points at grades 4, 7, and 10 coded as academic content, Foundational, or Pivotal Skills, using NAAC definitions for Foundational and Pivotal Skills. In a few cases, miscoding of Foundational Skills was corrected and documented by the Center for Assessment. Numerical counts and percents were calculated. Each Entry Point has 3 levels of complexity (less-moderate-more complex) and all were included in the overall totals.

Entry Points rated as *not academic* (meaning all identified Pivotal and Foundational Skills in each content area) were given a secondary coding, completed by special education experts to show which of these Entry Points could be accessed by students functioning at the pre-symbolic (e.g., communicates with gestures), early symbolic (e.g., beginning to use pictures, symbols), or symbolic (e.g., speaks or has vocabulary of pictures) levels.

Because Foundational Skills could be included for assessment in teacher-designed tasks, special education experts were also asked to review each piece of student work at each grade level, for each content area. Three representative grade levels were used for comparison – grades 4, 7, and 10. One of the objectives of this task was to determine to what degree Foundational Skills were assessed in the DC CAS- Alt compared to the number of academic skills assessed. Very few Pivotal and Foundational Skills were included for assessment at any of these grade levels grade level.

Summary

The data reveal a high degree of emphasis on assessing academic content in both reading and mathematics at all grade levels in the DC CAS- Alt. This would indicate that teachers are predominantly selecting academic content for portfolio assessment tasks, using their knowledge of student strengths and needs to develop a targeted skill for the student to focus on in each strand.

Identification of Pivotal Skills: While Pivotal Skills may be appropriate and important for instruction, they should not be targeted for the DC CAS- Alt, as they are not considered content-specific. Secondary coding by special education experts indicates that students functioning at pre-symbolic and early symbolic levels can access the 1 Pivotal Skill identified in reading at grade 4; reviewers questioned whether students functioning at pre-symbolic levels could access the 1 Pivotal Skill identified in mathematics.

- **Reading:** One Pivotal Skill was identified by the content experts at the grade 4 level: *4IT-DP6 Locate common signs, symbols, or pictures in the environment*. The content specialists considered this to be a Pivotal rather than Foundational Skill since it includes “symbols” which might include mathematical (e.g., \$, %, etc.), as well as other non-

reading symbols, signs, or pictures. No other Pivotal Skills were identified in reading at any grade span.

- **Mathematics:** One Pivotal Skill was identified by the content experts at the grade 4 level: *4NSO-C20 Sort objects into groups*. The content specialists considered this to be a Pivotal rather than Foundational Skill since it implies sorting any object for any purpose, including using mathematical attributes (e.g., size, shape, etc.). No other Pivotal Skills were identified in mathematics at any grade span.

Identification of Foundational Skills: Secondary coding by special education experts indicates that students functioning at early symbolic and pre-symbolic levels can not access the majority of Foundational Skills identified in reading and mathematics, since they require understanding that symbols – letters, words, numbers – represent meaning. It is recommended that all Foundational Skills be reviewed and perhaps revised for greater accessibility for students functioning at early symbolic and pre-symbolic levels.

- **Reading:** A total of eight Foundational Skills were identified in reading in the three grade levels reviewed. Most Foundational Skills identified at all grade levels related to identifying letters or words in texts. Examples of Foundational Skills identified by content experts in reading included:
 - Grade 4:** *4IT-E1 identify words in an informational text; 4LT-P9 identify letters/words in a poem*
 - Grade 7:** *7LT-G3 Identify words/letters in a grade-level fiction text*
 - Grade 10:** *10LT-F4 Identify words/letters in foreshadowing; 10IT-E2 Identify words in expository text*
- **Mathematics:** A larger number of Foundational Skills were identified in mathematics than in reading: at grade 4, ten Foundational Skills; at grade 7, nine Foundational Skills; and at grade 10, eleven Foundational Skills were identified. Most Foundational Skills are variations of “identify numbers...” Some examples of Foundational Skills identified by content experts in mathematics included:
 - Grade 4:** *4NSO-N1 Identify numbers; 4NSO-C19 Identify numbers in a multiplication problem*
 - Grade 7:** *7DASP1 Identify numbers in a data set; 7DASP2 Identify numbers in a table or chart*
 - Grade 10:** *AI-N1 Identify operations; AI-N3 Identify a number within a percent*

Table 1.1 (Reading) and Table 1.2 (Mathematics) show the percent of DC CAS- Alt Entry Points identified as academic content or as Foundational or Pivotal Skills at grades 4, 7, and 10 (in left columns). In addition to review of Entry Point by content experts, approximately one third of all portfolio work samples (from 2006-07) were reviewed at each of 3 grade levels by special education experts (grade 4: 16 portfolios; grade 7: 23 portfolios; grade 10: 24 portfolios). Each portfolio contains 3 work samples/content area for a total of 6 work samples for each student. Columns to the right in Tables 1.1 and 1.2 show the percent of Academic or Foundational Entry Points actually assessed in the portfolio work samples reviewed at each grade level.

Table 1.1: Summary of Academic Content or Foundational/ Pivotal Skills in Reading				
Reading	DC CAS- Alt Entry Points		Entry Points Assessed in 2006-07 Portfolios <i>Sampled</i>	
Grade Level	Academic Content	Foundational or Pivotal Skills	Academic Content Assessed (portfolio work samples)	Foundational Skills Assessed (portfolio work samples)
4	95%	5%	Lang Dev – 100% Lit Text – 100% Info Text – 82%	Lang Dev – 0% Lit Text – 0% Info Text -18%
7	99%	1%	Lang Dev – 100% Lit Text – 96% Info Text – 100%	Lang Dev – 0% Lit Text – 4% Info Text -0%
10	98%	2%	Lang Dev – 100% Lit Text – 96% Info Text – 96%	Lang Dev – 0% Lit Text – 4% Info Text -4%
Reading Content Strands Lang Dev = Language Development Lit Text = Literary Text Info Text = Informational (Expository) Text				

Table 1.2: Summary of Academic Content or Foundational/Pivotal Skills in Mathematics				
Mathematics	DC CAS- Alt Entry Points		Entry Points Assessed in 2006-07 Portfolios <i>Sampled</i>	
Grade	Academic Content	Foundational or Pivotal Skills	Academic Content Assessed (portfolio work samples)	Foundational Skills Assessed (portfolio work samples)
4	81%	19%	NSO – 88% PRA – 88% M - 88%	NSO – 12% PRA – 12% M – 12%
7	90%	10%	NSO – 100% PRA – 96% DASP - 92%	NSO – 0% PRA – 4% DASP – 8%
10	92%	8%	AI – 92% G – 100%	AI – 8% G – 0%
Mathematics Content Strands NSO = Number Sense & Operations M = Measurement AI = Algebra I PRA = Patterns, Relations, & Algebra DASP = Data Analysis, Statistics, & Probability G = Geometry				

Discussion of Findings for Criterion #2:

All Entry Points for three grade levels (4, 7, and 10) were reviewed for reading and mathematics. Content experts analyzed content descriptions for the three complexity levels (less-moderate-more complex) for each Entry Point, comparing them to the DCPS grade-level standards. The format used for DC CAS- Alt Entry Points document greatly facilitated these analyses, in that it provides both the grade-level standards as written and “the essence and prioritized skills” of each standard with a continuum of possible Entry Points. Summaries for each grade span in each content area were totaled to reflect the number and percent of content matches made to each grade level.

Summary

There is compelling evidence to support the conclusion that the DC CAS- Alt is not promoting a “one size fits all ages” assessment system (meaning that the same Entry Points would apply to all students at all grade levels, which is undesirable).

- The development process and format used by DCPS and ILSSA to create the extended standards/Entry Points has resulted in the overall system being organized by grade level and content strands that are consistent with DC CAS content and content strands.
- The inclusion of both the grade-level standards as written and “the essence and prioritized skills” of each standard ensures that teachers understand the intended learning described in Entry Points for that grade level.
- The approach of organizing content of possible Entry Points by less-to-more complex allows for students functioning at a variety of levels to access learning that is referenced to their grade level.
- Reviewers noted the need to clarify some Entry Points that were not consistently formatted or worded across grade levels, making some analyses more difficult.
- There is strong evidence to show that required content is differentiated across grade levels 3-10 for both reading and mathematics. (More details are provided under Criterion #5.)
- Some of the required content for the DC CAS- Alt is lacking Entry Points. Continued development of the remaining Entry Points is recommended.

Discussion of Findings for Criterion #3:

This criterion draws upon alignment processes developed by Achieve (Achieve. Inc.), and is based on a group of experts reaching consensus as to whether the test item and the intended objective(s) correspond fully, partially, or not at all. For this criterion, Entry Points (EPs) in reading and mathematics for grades 4, 7, and 10 were compared to the corresponding grade level standards for content and performance centrality. Content and performance centrality were only considered for Entry Points coded as academic for Criterion #1.

Content Centrality (based on NAAC definitions) is rated using a three-point scale (near, far, none) in which the content experts rate the quality of the link between the EPs and the grade level standard. For example, an Entry Point of *Identify weather conditions* may have no link to a

grade level standard, *Analyze and identify types of clouds*. An EP of *Identify clouds* may be considered a “far” link, because even though it is dealing with clouds, it still does not address the total content domain of the original standard that is types of clouds. A “near” link for an extended standard/EP would be something like, *Identify cumulous and not cumulous clouds*. The information obtained from coding grade-referenced content for Criterion #2 is used to make decisions about the degree of the content link – near/far/none. A strong alternate assessment system is one that expects the content fidelity to remain high.

Performance Centrality (based on NAAC definitions) concerns the expected performance described in the EPs. Alternate assessments are expected to allow for an alternate level of performance (meaning not the same as grade level performance in DC CAS general education assessments), due to the difficulty of creating ways for students who do not yet have fluent use of printed symbols (e.g., words, pictures) to show achievement. Therefore, an EP of “identify” would have some of the same performance expectations as a grade-level standard with “identify and analyze” for the same content, and would be acceptable. Performance centrality is rated on a three-point rating scale (exact match, partial match, no match), using identified Depth of Knowledge levels for grade-level standards and EPs.

Summary

Content centrality was found to be very high (95-100%) for both reading and mathematics Entry Points at the three grades reviewed. Performance centrality shows a range of DOK levels across Entry Points and assessment tasks at all grade levels; however, there are no obvious or consistent patterns for performance centrality findings across grade levels. A closer internal analysis of DOK data by DCPS and ILSSA is recommended to affirm whether the data reflect the balance of emphasis intended in the DC CAS- Alt.

Content Centrality percents reflect the total of near + far links with grade-referenced content. The goal of content centrality is to have a 100% link (near + far) of grade-referenced content. Percents lower than 100% for content centrality reflect content that has not been identified as Foundational or Pivotal, but is considered a prerequisite skill or mismatch to the standard, so content links are lost between the EP and standard.

- **Reading:** Only two Entry Points at grade 4 were coded as “0” or no content link. For example, EP *4LD-V10 match definition/picture with corresponding word is academic and could be a requisite skill to this standard*; however, it is not a content match for the prioritized skill, “analyze the meaning of unfamiliar words using root words and affixes.”
- **Mathematics:** Only one Entry Point at grade 4 was coded as “0” or no content link. EP *4PRA-4 solve addition and subtraction problems, is academic and might be a requisite skill to this standard*; however, it is not a content match for the prioritized skill, “solve problems involving proportional relationships.”
- **Student work samples:** Approximately one third of all DC CAS- Alt portfolios from 2006-07 were reviewed for content centrality. A total of 451 mathematics tasks and 458 reading tasks were analyzed by special education experts. Depending on the grade level, reading content centrality was impressively high: 89% - 98%; and mathematics content centrality was 87% - 97%.

Performance Centrality percents show the total of exact match + partial match. Findings show that assessments in the DC CAS- Alt address a wide range of DOK levels and are not only focused on simple recall.

- **Reading:** Most reading EPs not matched at all for performance tended to be because the prioritized skill had a high DOK demand (e.g., *10LT-F5 explain how narrator’s point of view affects tone...*), while the EPs focused only on lower DOK levels (e.g., *identify the tone of the selection; define point of view*, etc.). Non matches for performance centrality were almost always related to “less complex” EPs, while the “moderate” and “more” complex EPs were usually coded as exact or partial matches in performance centrality.
- **Mathematics:** Non matches in mathematics performance often occurred when the prioritized skill was related to problem solving or application of properties and operations (e.g., *10AI-N3 apply ratios, proportions, rates, and percentage calculations to solve problems*) whereas the corresponding EPs did not (e.g., *identify a ratio; understand that .50=50%*).

Table 3.1 summarizes content and performance centrality for reading and mathematics Entry Points. Since Entry Points tend to be of a smaller grain size than grade-level standards, all EPs for each complexity level (less complex-moderately complex –more complex) were considered collectively to make decisions under Criterion #3.

Grade Level	Reading		Mathematics	
	Content Centrality	Performance Centrality	Content Centrality	Performance Centrality
4	95%	68%	95%	58%
7	100%	55%	100%	66%
10	100%	88%	100%	55%

Table 3.2 summarizes *content centrality only* for reading and mathematics portfolio work samples reviewed at each grade level. Each portfolio task was considered individually to determine the degree of content centrality with the teacher-selected Entry Point. At all grade levels, more tasks were coded as full content matches than as partial or no content match.

Grade Level	Reading		Mathematics	
	Number of work samples reviewed	Content Centrality	Number of work samples reviewed	Content Centrality
3	63	95%	60	95%
4	48	98%	48	94%
5	62	89%	63	97%
6	66	95%	63	95%
7	68	93%	67	87%
8	83	90%	84	94%
10	68	94%	66	94%

Discussion of Findings for Criterion #4

Criterion #4 applies the work of Norman Webb’s Alignment Protocols for categorical concurrence, balance of representation, and range and depth of knowledge (DOK). Content specialists identified DOK levels for all Entry Points, using “modified” Bloom’s Taxonomy definitions for Depth of Knowledge levels established by NAAC for alternate assessment. DC CAS Test blueprints (DC CAS strands targeted for assessment and required content) served to define categorical concurrence and comparisons of balance of representation with the DC CAS-Alt. Special education experts coded all work samples for DOK assessed in the task.

“Modified” Bloom’s Taxonomy for alternate assessment alignment studies (developed by NAAC)	
Codes	Depth of Knowledge (DOK)
1	<i>Attention</i> (touch, look, vocalize, respond, attend)
2	<i>Memorize/recall</i> (list, describe (facts), identify, state, define, label, recognize, record, match, recall, relate)
3	<i>Performance</i> (perform, demonstrate, follow, count, locate, read)
4	<i>Comprehension</i> (explain, conclude, group/categorize, restate, review, translate, describe (concepts), paraphrase, infer, summarize, illustrate)
5	<i>Application</i> (compute, organize, collect, apply, classify, construct, solve, use, order, develop, generate, interact with text, implement)
6	<i>Analysis, Synthesis, Evaluation</i> (pattern, analyze, compare, contrast, compose, predict, extend, plan, judge, evaluate, interpret, cause/effect, investigate, examine, distinguish, differentiate, generate)
X	<i>Can’t score/too vague</i>

Summary

Depth of Knowledge

Depth of Knowledge examines the consistency between the cognitive demands of the standards and cognitive demands of assessment items. Aligned assessments should be designed to measure in some way the full range of expected knowledge for each content area.

- **Reading DOK:** While the majority of reading Entry Points at the three grade levels reviewed (Table 4.1R) were identified as DOK 2 (recall), there is also a wide range of DOK levels intended to be sampled. Reading work samples across all grades (Table 4.2R) also revealed a wide range of DOK levels targeted for assessment, meaning portfolio tasks were targeted for DOK 1 (attention) through DOK 6 (analysis, synthesis, or evaluation).

Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
4	0%	69%	9%	<1%	14%	7%
7	0%	47%	7%	14%	16%	16%
10	0%	29%	11%	23%	16%	21%

Table 4.2R Range of DOK for Reading <i>Using Student Work Samples</i> : <u>Number</u> of Work Samples/Assessment Tasks Addressing Each DOK Level						
Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
3	0	1	42	8	1	10
4	3	31	4	4	7	5
5	4	39	1	9	4	4
6	4	49	9	19	10	0
7	0	24	14	23	4	6
8	0	41	3	23	14	3
10	0	17	5	17	4	23
TOTALS	11	202	78	103	44	51

- Mathematics DOK:** As with reading, the majority of mathematics Entry Points at the three grade levels reviewed (Table 4.1M) were identified as DOK 2 (recall) with a shift towards more DOK 5 and 6 levels at the upper grade levels. Mathematics also showed a wide range of DOK levels addressed in portfolio work samples across all grades (Table 4.2M), meaning portfolio tasks were targeted for DOK 1 (attention) through DOK 6 (analysis, synthesis, or evaluation) and did not only focus on basic recall.

Table 4.1M Range of DOK for Mathematics <i>Entry Points</i> : <u>Percent</u> of Mathematics Entry Points Intended to Sample each DOK Level						
Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
4	0%	55%	18%	0%	20%	7%
7	0%	32%	6%	9%	31%	22%
10	0%	34%	10%	4%	34%	18%

Table 4.2M Range of DOK for Mathematics <i>Using Student Work Samples</i> : <u>Number</u> of Work Samples/Assessment Tasks Addressing Each DOK Level						
Grade Level	DOK 1 Attention	DOK 2 Recall	DOK 3 Perform	DOK 4 Comprehend	DOK 5 Apply	DOK 6 Analyze, Synthesize, Evaluate
3	2	37	16	0	6	1
4	3	24	6	2	12	11
5	3	35	7	0	14	6
6	0	0	12	44	7	24
7	0	16	16	9	15	13
8	3	17	20	6	20	13
10	0	8	24	4	21	8
TOTALS	11	137	101	65	95	76

Categorical Concurrence

The Categorical Concurrence criterion provides a very general indication of alignment if both the standards and assessment incorporate the same content. The criterion of Categorical Concurrence is met if the same or consistent categories/major strands of content appear in both. For the purpose of this study, and due to the flexible nature of the DC CAS- Alt assessment tasks and small sample size (requiring assessment of 3 targeted EPs for each content area), the range and balance of the DC CAS- Alt is compared to the state’s priorities for DC CAS, with consideration given to *some coverage in all major strands of content*. Content strands identified in the DC CAS- Alt blueprint and required content were compared to the state’s priorities for the DC CAS and required content in the DC CAS test blueprint.

- **Reading:** Three major strands are assessed in both the DC CAS and DC CAS-Alt: Language Development, Literary Text, and Informational (expository) Text.
- **Mathematics:** Five major strands are assessed in the DC CAS: Number Sense & Operations; Patterns, Relations, & Algebra; Geometry; Measurement; and Data, Probability, & Statistics. The DC CAS- Alt blueprint requires 3 of the 5 major strands to be assessed each year, with Number Sense & Operations and Patterns, Relations, & Algebra as two of the strands sampled at all grade levels. The other strands are alternated across grade levels to ensure that the remaining strands - Geometry; Measurement; and Data, Probability, & Statistics – are included for instruction and assessment with intent across grade levels.

Balance of Representation and Range of Knowledge

In addition to comparable depth and breadth of knowledge, aligned standards and assessments require that assessment of knowledge (content and skills) be distributed with intent. The Balance of Representation criterion is used to indicate the degree to which one standard/objective is given more emphasis on the alternate assessment than another.

- According to the *DC CAS- Alt Revised Technical Manual* (2006), changes were made to the test blueprint for the 2006-07 school year in order to improve the Balance of Representation and Range of Knowledge by examining the test specifications of the DC CAS, selecting substrands that are assessed on the DC CAS, and increasing the number of strands assessed from 2 to 6. These changes were evidenced in the study and have resulted in stronger validity of the DC CAS- Alt.
- **Reading:** The DC CAS- Alt blueprint places equal emphasis on the three major reading strands at all grade levels, requiring one assessment focus for each strand. All grade-level content required for the DC CAS- Alt is also assessed in the general education DC CAS in reading.
- **Mathematics:** The DC CAS- Alt blueprint places emphasis on three of the five major mathematics strands at each grade level, requiring one assessment focus for each required strand. Number Sense & Operations and Patterns, Relations, & Algebra have slightly more emphasis, because they are sampled at all grade levels. The strands of Geometry, Measurement, and Data, Probability & Statistics are alternated across grades with

changing emphasis. All grade-level content required for the DC CAS- Alt is also assessed in the general education DC CAS in mathematics.

Discussion of Findings for Criterion #5:

After reviewing the degree of alignment of Entry Points to the specific grade-level standard referenced (for Criterion #2), content experts then identified how the content of Entry Points is differentiated from grade to grade. Reviewers examined and compared required content for the DC CAS- Alt across grades 3 through 10. Breadth, depth, and “new” content descriptions were considered in this review and examples documented.

Content differentiation decisions were based on descriptions of changing content recommended by NAAC. Raters looked at adjacent grade levels to identify evidence of...

- ✓ **Increasing breadth of content** (e.g., broader application of target skill such as expanding the types of graphic displays of data used in mathematics or using more features of text – index, captions, subheadings, etc.)
- ✓ **Increasing depth of content** (e.g., deeper mastery of target skill, such as going beyond basic recall to interpretation or analysis or to more complex/abstract content)
- ✓ **New content introduced** (e.g., content not covered in prior grade, such as new strands of content or content more appropriate for older learners)

Special education experts coded work samples for differentiation across grade levels and for age appropriateness of assessment tasks. Age-appropriateness decisions were based on descriptions recommended by NAAC.

Age-Appropriateness Coding Descriptions for Structured Performance Tasks (NAAC)
1- Adapted from grade level content (e.g., Roll of Thunder, Hear My Cry)
2- Not grade specific; neutral; themes are appropriate for all ages (e.g., pets)
3- Inappropriate for teens (e.g., circus)
4- Inappropriate even for elementary age (e.g., Barney)

The Center for Assessment staff analyzed draft (April 2007) DCPS alternate achievement level standards for each grade level and content area. Differences between performance levels at each grade span, as well as differences across grade spans, were examined using NAAC guidelines.

Summary

- Content Experts identified strong evidence to support that *some* Entry Points and required content is differentiated across grade levels 3-10 for both reading and mathematics. Table 5.1a shows *some* of the specific examples from each strand that were documented in reading. Table 5.2a shows *some* of the specific examples from each strand that were documented in mathematics across grade levels. In a few cases, a lower grade’s Entry Points was found to be broader or deeper than the higher grade level. This might warrant some review by DCPS. Raters also noted some lack of consistency in use of terminology or format of Entry Points across grades, especially in mathematics.

Table 5.1a Reading Entry Points Content Differentiation Grade-by-Grade						
Evidence of SOME...	Grade 3 to 4	Grade 4 to 5	Grade 5 to 6	Grade 6 to 7	Grade 7 to 8	Grade 8 to 10
Increasing breadth of content		5LD-V8 5IT-E1 5LT-3		7IT-E3	8IT-E1	10LT-F5
Increasing depth of content	4LD-V10 4IT-E3 4LT-F6		6IT-E1 6LT-T3	7IT-E1	8LD-V10 8IT-E2	10LD-V9 10LT-T3 10IT-E2
New content introduced	4IT-E2 4LT-T4	5LD-V9 5IT-A7	6LD-V9 6IT-E3 6LT-C1	7LD-V8	8LD-V10	10LD-V10 10LT-F4 10IT-E5

Table 5.2a Mathematics Entry Points Content Differentiation Grade-by-Grade						
Evidence of SOME...	Grade 3 to 4	Grade 4 to 5	Grade 5 to 6	Grade 6 to 7	Grade 7 to 8	Grade 8 to 10
Increasing breadth of content	4NSO-N1	5NSO-N1	6NSO-C8 6PRA-1	7NSO-N7 7PRA-6	8PRA-2	AI-N3 AI-N1 AI-D1
Increasing depth of content	4NSO-N1 4NSO-C19	5PRA-1	6NSO-C8 6PRA-9	7PRA-4	8PRA-2	AI-N3 AI-P8
New content introduced	All measurement	5G1-6 5PRA-3	6NSO-N6	7DSP-1 7DSP-2 7PRA-7	8NSO-N9 8NSO-N17	GG-3 GG-15 GG-20

- **Age-appropriateness was reviewed for all student work samples.** In both content areas, and across all grade levels, almost 100% of the assessment contexts were identified as appropriate for the age of students. Only one of the more than 900 pieces of student reviewed was coded as “inappropriate for teens. This was a reading assessment at the grade 5 level and there was some discussion about the text used for a grade 5 student.
- **Achievement Level Standards (Achievement Level Descriptors)**
DCPS Achievement Level Standards address 4 performance levels: Advanced, Proficient, Basic, and Below Basic. A strength of these descriptors is that differences in achievement level descriptors at each grade level are articulated in terms of the grade-referenced content knowledge and skills for content strands. Differences in performance expectations between performance levels within one grade level and differences across adjacent grades were clear in terms of content identified, especially between the Basic and Proficient levels, even though there is understandably much content overlap. Additional specific findings related to strengths of the DCPS Achievement Level Standards are discussed in more detail under Criterion #6. Table 5.1 shows a comparison of Achievement Level Standards (Proficient Level) for grades 4 and 5 in mathematics.

Table 5.1 Comparison of Achievement Level Standards for grades 4 and 5 in Mathematics.	
Grade 4 Proficient	Grade 5 Proficient
<p>Provided supports such as assistive technology, adaptations, and/or modifications, and a skill that is reduced in complexity the student demonstrates understanding of content as outlined in the following:</p> <p>Number Sense and Operations</p> <ul style="list-style-type: none"> Understand the base ten system (e.g., 10 ones = 1 ten, 10 tens = 100 ones, 10 one hundreds = 1,000, etc.) Identify numbers to 10,000 including expanded notation and written out in words Estimate addition and subtraction with decimals Estimate quantities, measures and amounts of money Solve addition and subtraction problems Solve multiplication problems Use conventional procedures and formulas to solve division problems Apply operations to solve problems Understand fractions as parts of a whole, collection and place it on a number line Demonstrate understanding of equivalent forms of decimals and fractions 	<p>Provided supports such as assistive technology, adaptations, and/or modifications, and a skill that is reduced in complexity the student demonstrates understanding of content as outlined in the following:</p> <p>Number Sense and Operations</p> <ul style="list-style-type: none"> Understand number concepts to very large or very small numbers (including decimals) to estimate, round and manipulate numbers Identify very large and small numbers (including expanded notation) Identify integers, decimals, mixed numbers, or fractions on a number line. Identify numbers, including fractions, mixed numbers, decimals and percents Identify prime numbers to 100 Identify fractions as part of a whole Represent percents are a part out of 100 Identify equivalent fractions, mixed numbers, decimals, and percents Identify improper fractions and mixed numbers <p>Solve addition and subtraction</p> <ul style="list-style-type: none"> problems involving fractions and express them in simplest form Add and subtract decimals Solve multiplication and division problems Multiply decimals and whole numbers Use estimation
<p>Patterns, Relations and Algebra</p> <ul style="list-style-type: none"> Understand geometric and numeric patterns Use letters and other symbols as variables Demonstrate understanding of mathematical relationships illustrated through various methods Solve problems involving proportional relationships 	<p>Patterns, Relations and Algebra</p> <ul style="list-style-type: none"> Identify and extend patterns Use values to solve problems Use properties of equality to solve problems Use graphs and models to represent real situations Identify order of operations Identify proportional problems Identify graphs that represent real life situations
<p>Measurement</p> <ul style="list-style-type: none"> Identify appropriate units and tools to solve problems involving: <ul style="list-style-type: none"> length volume weight angle size Convert within system of measurement Tell time with hours and days Compute area and perimeter Understand the concept of perimeter and area 	<p>Geometry</p> <ul style="list-style-type: none"> Identify polygons Identify three-dimensional shapes and their properties Identify points, line, and planes Identify types of symmetry Identify congruent triangles or quadrilaterals Identify transformation on two-dimensional shapes Identify the Cartesian coordinate plane's first two quadrants

Discussion of Findings for Criterion #6:

This criterion used the *Degree of Inference about Student Learning* checklist (included in Codebook, Appendix B.4) for analysis of Achievement Level Standards and information related to how inferences are made about student learning to ascertain the degree to which the alternate achievement standards align to the academic content standards.

Typically, inferences are more difficult to make when scores incorporate aspects of teachers' or program performance or when there is only a one-time performance. Teacher prompting is allowed during the DC CAS- Alt, and guidelines are provided in the administration manual related to types of prompts (e.g., auditory, visual, and physical prompts). Scoring documentation includes the criterion of "level of assistance" in addition to scoring for "accuracy." The separation of these two scores allows for making more accurate interpretations of what students have learned.

Summary

This discussion focuses on Achievement Level Standards and scoring protocols. Using NAAC guidelines, the special education experts' review of scoring protocols looked for indicators with the potential to make high inferences that the student learned the grade-level content. (See Appendix B.3, pages 4-5 for details on NAAC guidelines.)

The strongest indicators identified in DCPS scoring protocols and Alternate Assessment Achievement Level Standards for having the potential to make high inferences about student learning were:

- Inclusion of *separate* measures for accuracy and independence, so that each may be considered when making inferences about progress and learning;
- Depending on how assessment tasks are designed by teachers, they *have the potential* for demonstrating generalization across people or settings when/if contexts are varied for each of the data collections;
- Differences in content strands assessed, required content, and Entry Points at each grade level indicate that new content (meaning teacher selection of different/new content) is targeted for assessment at each grade level;
- Multiple data collections (3-5 pieces for each of 3 content entries) provide a baseline against which progress can be measured;
- Inclusion of consideration of level of complexity of task in scoring; and
- Program quality indicators are **not** included with student's score or with Achievement Level Standards.

Areas for possible closer examination and professional development

For some students, these assessments may show mastery of generalizable skills, but for others they may be rote responses, given the flexibility in task design and Entry Points chosen for assessment. Differences in task design might be worth monitoring to determine the degree to which tasks are capturing data on rote memorization or mastery/generalization across contexts and generalization across conceptual understanding.

Discussion of Findings for Criterion #7:

Special education experts completed a NAAC survey, *Minimizing Barriers for Students* (Appendix C.5), after a review of the DC CAS- Alt administration manual guidelines related to accommodations, modifications, and scoring protocols for both content areas.

Reviewers agreed that students with any of the disabilities listed on the survey would have the ability to demonstrate learning. Administration guidelines were found to be consistent across content areas and provided flexibility for all examples of disabilities included:

- visually impaired/legally blind;
- hearing impaired;
- deaf/blind;
- nonverbal – responds using printed words;
- nonverbal – responds using pictures;
- nonverbal – responds using manual signs;
- nonverbal – responds using eye gaze;
- verbal but no use of hands; and
- communicates with objects or by indicating yes/no.

The DC CAS-Alt represents a multi-disciplinary approach to assessing student learning, access to the district and grade level learning standards, and varied opportunities to learn. One strength of the DC CAS- Alt is its flexibility in teacher-designed assessment tasks to meet the individual needs of students with significant cognitive disabilities. There was agreement among the special education reviewers for Criterion # 7 that the administration manual provides clear guidance for accommodations and modifications when designing assessment tasks, so that students can demonstrate what they have learned through a variety of response modes.

These results can be interpreted as: 1) Flexibility is built into the portfolio tasks, due to teacher choice/design of tasks; 2) Accommodations are not built into common tasks, but are described in the test administration materials and may be applied to any type of student disability; and 3) Modifications are not built into common tasks, but are described in the test administration materials and may be applied to any type of student disability.

Discussion of Findings for Criterion #8:

Criterion 8: Does the instructional program for students with significant cognitive disabilities promote learning in the general curriculum?

Instructional alignment is especially important given the conceptual shift many educators must make to teach this population content that links to grade level standards. For this criterion, consideration is also given to whether professional development materials link to general education expectations and promote overall program quality. The professional development review identifies how well the training materials provided to teachers of students with significant cognitive disabilities include information regarding academic content and best instructional practices for this population. To gather data for this criterion, special education experts completed a NAAC survey –*Program Quality Indicators*. Center for Assessment staff reviewed a sampling of current professional development materials and interviewed ILSSA staff about on-going professional development opportunities that support implementation of the DC CAS- Alt.

Findings for Criterion #8:

Information about instructional programs and professional development support is not required by NCLB and was collected by DCPS for internal analysis, discussion, and future planning only. For this reason, and because the sampling of special education teachers was small, no detailed summary of findings for the surveys related to Criterion 8 is included in this report. The Conclusions section of this report identifies some potential issues to be addressed through ongoing professional development provided by DCPS and ILSSA.

Current Professional Development and Instructional Support

- The Inclusive Large-Scale Standards and Assessment group (ILSSA) has developed and provided on-going training opportunities to support special education teachers in developing both curriculum and instruction for students with severe cognitive disabilities. Technical assistance has taken many forms – from large-group/whole school support to individual targeted assistance in reviewing student work and documenting data collection.
- Scoring academy trainings, led by ILSSA staff, have been credited for expanding the expertise of special educators across the district in implementing effective curriculum and instruction for this population of students.
- The *District of Columbia Alternate Assessment Portfolio Revised Teachers' Guide* provides many examples and links to general education expectations as a guide to teaching and assessing grade-referenced content.
- DCPS is to be commended for these ongoing efforts in supporting teaching and learning of students with severe disabilities. It is recommended that this support to teachers continue in order to reach each educator working with the DC CAS- Alt, as well to expand the reading and mathematics content knowledge and instructional skills of special education teachers.

Conclusions

All states are struggling to find appropriate approaches to address the unique needs of students with severe cognitive disabilities. It has been said that this population of students are more heterogeneous than the other 99% of the population! Tremendous pressure has been placed on educators at all levels of the system to replace “older” models of teaching only functional skills with instruction of academic content. DCPS is to be commended for its efforts to raise the standards for these students, and in doing so, also provide support for their teachers.

The District of Columbia Public Schools Department of Education has been willing to place their Alternate Assessment system under a microscope in order to learn what is already working well and to find ways to improve the overall system. Over 900 pieces of student work from the current school year were reviewed in addition to document and content reviews, revealing a “true” picture of what implementation of the DC CAS- Alt actually looks like across teachers, schools, and grade levels. The DCPS development process, intent, and test blueprint are strongly reflected in the overall format of both content areas and content targeted for assessment at each grade level. The major strengths identified in the DC CAS- Alt are summarized below.

Strengths of the DCPS Alternate Assessment System

There is compelling evidence to support the conclusion that the DC CAS- Alt is not promoting a “one size fits all ages” assessment system.

- **The development process and format** used by DCPS and ILSSA to create the extended standards/Entry Points has resulted in the overall system being organized by grade level and content strands that are consistent with DC CAS content and content strands.
- **The approach of organizing content** of possible Entry Points by less-to-more complex allows for students functioning at a variety of levels to access learning that is referenced to their grade level.
- There is strong evidence to show that **required content is differentiated across grade levels 3-10** for both reading and mathematics.
- There is a **high degree of emphasis on assessing academic content in both reading and mathematics at all grade levels** in the DC CAS- Alt. This would indicate that teachers are predominantly selecting academic content for portfolio assessment tasks, using their knowledge of student strengths and needs to develop a targeted skill for the student to focus on in each strand.
- The changes made to the test blueprint for the 2006-07 school year in order to improve the Balance of Representation and Range of Knowledge were evidenced in the study and have resulted in **stronger validity of the DC CAS- Alt**.
- **Categorical concurrence and range of knowledge data indicates *some coverage in all major strands of content***. In reading, three major strands are assessed at all grade levels.

The five major strands of mathematics are systematically assessed across grades 3-10 with shifting emphasis at different grade levels.

- In both content areas, and across all grade levels, almost 100% of the assessment contexts were identified as **appropriate for the age of students**.

Strengths of the Extended Standards: Entry Points and Required Content

- **Content centrality** was found to be very high (95-100%) for both reading and mathematics at the three grades reviewed in depth.
- **Performance centrality** data show that Entry Points and portfolio assessments in the DC CAS- Alt address a wide range of DOK levels and are not only focused on simple recall or the lowest levels of cognitive demand.
- Entry Points at **three complexity levels** provide guidance to teachers in designing instruction and assessment.
- **Entry Points are predominately academic**, with very few Foundational Skills included. This means that there is a high degree of grade-referenced content included for instruction and assessment.
- **The inclusion of both the grade-level standards** as written and “the essence and prioritized skills” of each standard ensures that teachers understand the intended learning described in Entry Points for that grade level.

Strengths of DCPS scoring protocols and Alternate Assessment Achievement Level Standards for having the potential to make high inferences about student learning:

- Inclusion of *separate* measures for accuracy and independence, so that each may be considered when making inferences about progress and learning;
- Depending on how assessment tasks are designed by teachers, they *have the potential* for demonstrating generalization across people or settings when/if contexts are varied for each of the data collections;
- Differences in content strands assessed, required content, and Entry Points at each grade level indicate that new content (meaning teacher selection of different/new content) is targeted for assessment at each grade level;
- Multiple data collections (3-5 pieces for each of 3 content entries) provide a baseline against which progress can be measured;
- Inclusion of consideration of level of complexity of task in scoring; and
- Program quality indicators are **not** included with student’s score or with Achievement Level Standards.

Alternate Assessment Administration Guidelines

- A strength of the DC CAS- Alt system is that there is flexibility in designing assessment tasks to meet the individual needs of students with significant cognitive disabilities. Special education reviewers agreed that the design of the DC CAS- Alt allows for flexibility in accommodations and modifications so that students can demonstrate what they have learned through a variety of response modes.

- Data collection protocols and forms for the DC CAS- Alt are clear and detailed and require documentation of both accuracy and level of independence in order to have meaningful interpretations about student learning and growth.

Areas of Recommendation for the DCPS Alternate Assessment System

All recommendations in this section of the report are intended to strengthen an already solid alternate assessment system. Comments from reviewers and in-depth analyses have been synthesized and are used here to provide some guidance to DCPS and ILSSA staff for future planning in ways to improve the DC CAS- Alt.

Review and Perhaps Revise *Some* Content Assessed

- The majority of Foundational Entry Points are **not** accessible to students functioning at the awareness, pre-symbolic, and early symbolic levels. All Foundational Skills should be reviewed and perhaps revised, making them more appropriate and meaningful for students at these early-functioning levels.
- Some of the required content (both reading and mathematics) for the DC CAS- Alt is lacking Entry Points. Continued development of the remaining Entry Points is recommended, since it is clear that teachers use Entry Points to guide instructional decisions.
- Reviewers noted the need to clarify some Entry Points that were not consistently formatted or worded across grade levels, making some analyses more difficult.
- Mathematics Entry Points appear to be somewhat weaker overall than reading (e.g., lacking clarity, consistency, or having inappropriate examples as written). A rigorous review of mathematics content and consistent terminology is strongly recommended.
- In a very small number of cases, a lower grade's Entry Points were noted by reviewers to be broader or deeper than the higher grade level. This might warrant some review by DCPS as part of other revision work on Entry Points. If indeed, the grade-level standard is actually less broad or deep than the prior grade's standard, then Entry Points should be considered aligned to grade-level standards as written.

Administration Guidelines and Test Blueprint for the DC CAS- Alt

- Overall, the DC CAS reading assessment shows stronger evidence of categorical concurrence alignment with the DC CAS content strands than does mathematics. Mathematics does not assess all 5 major content strands at each grade span, but all content strands are assessed during the grades 3-12 experience in mathematics. This decision is probably very appropriate given this population; therefore, simply provide the underlying rationale that supports the existing balance of content strands assessed in mathematics in the test blueprint.
- Data from the alignment study provide a new view of cognitive demand across grade levels. Performance centrality shows a wide (and desirable) range of DOK levels across Entry Points and assessment tasks at all grade levels; however, there are no obvious or consistent patterns for performance centrality findings across grade levels. A closer internal analysis of DOK data by DCPS and ILSSA is recommended to affirm whether the data reflect the balance of emphasis intended in the Entry Points for the DC CAS- Alt. The purpose of this review would not be to reduce the existing range of DOK, but to *establish a balance of emphasis for the DOK* at each grade level. For example, data for mathematics (see Table

4.1M, page 38) show that from grade 4 to grade 7 to grade 10, there is an increasing emphasis on DOK 6 (Analysis, Synthesis, Evaluation). There is some logic to this shifting balance of emphasis, since students will have mastered more mathematics concepts by grade 10 and can delve more deeply into them. The mathematics data also show that at grade 7, DOK 3 (Performance) is lower than at both grades 4 and 10. Is that the intent or simply a result of how Entry Points were originally written? The “Front-end Alignment” work of K. Hess and M. Petit (National Center for Assessment, 2004) has been used by many states and can provide some guidance as to how to prioritize and pre-establish emphasis of DOK levels when developing grade level expectations (or in this case, Entry Points). These pre-alignment protocols can be applied during any revision or development work DCPS has planned for the future. It is also recommended that use of Norman Webb’s Depth of Knowledge Levels and Webb’s DOK levels for Special Education (as applied by K. Hess, National Center for Assessment) be used as a guide to achieve greater variety in how Entry Points are written are written at the same DOK level.

- For some students, these assessments may show mastery of generalizable skills, but for others they may be rote responses, given the flexibility in task design and Entry Points chosen for assessment. Differences in task design might be worth monitoring to determine the degree to which tasks are capturing data on rote memorization or mastery/generalization across contexts and generalization across conceptual understanding.

Alternate Assessment Achievement Level Standards

- Alternate Achievement Standards appeared to be in draft form. Set a timetable for completion of Alternate Achievement Standards.

Recommendations for Continued Professional Development and Instructional Support (*not required by NCLB*)

- Collect statewide data from teachers, using the NAAC *Program Quality* and *Professional Development* surveys. Data analysis will provide useful insights into areas mentioned in the report (e.g., content expectations, grade-referenced content, interpreting assessment results).
- Continue to include models and develop materials that make strong links between Entry Points and expectations.
- Use on-going monitoring activities and review of student work samples to identify exemplars of teacher-designed portfolio tasks for use in professional development settings (e.g., age-appropriate contexts, generalization of skills in different contexts, etc.) and for illustrating meaningful interpretations of student progress.

Sources Referenced

DCPS (April 2007) *District of Colombia Alternate Assessment Portfolio Revised Technical Manual*. Author.

DCPS & ILSSA *District of Colombia Alternate Assessment Portfolio Revised Teachers' Guide*. Authors.

Flowers, C., Browder, D., Wakeman, S., & Karvonen, M. (2007). "Links for Academic Learning: The Conceptual Framework." National Alternate Assessment Center (NAAC) and the University of North Carolina at Charlotte.

Hess, K. (2004) "Designing and Prioritizing Developmentally Appropriate Grade-Level Expectations: Building in Alignment from the Beginning of the Process" (CCSSO Presentation of New England Common Assessment Program for reading, writing, and mathematics) www.nciea.org

Hess, K. (2004 - 2006) "Applying Webb's Depth of Knowledge Levels" - Reading, Writing, Mathematics, Science, and Social Studies (5 separate articles). Available upon request at Khess@nciea.org.

Webb, N. L. (1997). *Criteria for alignment of expectations and assessments in mathematics and science education* (Council of Chief State School Officers and National Institute for Science Education Research Monograph No. 6). Madison: University of Wisconsin, Wisconsin Center for Education Research.

Webb, N. L. (2002). *Alignment study in language arts, mathematics, science, and social studies of state standards and assessments for four states*. Washington, DC: Council of Chief State School Officers.

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