Portfolio Alternate Assessment Alignment Study
Report to the State Department of Education

Abbreviated Report

Prepared by

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EXECUTIVE SUMMARY

This report details findings from an investigation of the alignment of the state's portfolio alternate assessments in English language arts (ELA) and mathematics with other components of the educational system. The criteria used in this alignment study are being evaluated as part of the UNC Charlotte partnership in the *National Alternate Assessment Center* (NAAC). This report is organized by the seven criteria developed by a collaboration of content experts, special educators, and measurement experts at UNC Charlotte (Browder, Wakeman, Flowers, Rickelman, Pugalee, & Karvonen, 2006). While some of the alignment criteria are similar to other alignment methods (e.g., Webb, Surveys of Enacted Curriculum, and Achieve), some of the criteria (criteria 5-7) were designed specifically as value indicators for students with significant cognitive disabilities (see Table 1). An additional difference between this alignment protocol and other alignment methods is the examination of the targeted standards (i.e., standards intentionally selected for students with significant cognitive disabilities) and grade-level content standards. This summary describes how well the interpretation of state standards (Grade level and Targeted skills), the alternate assessments (ELA-AA; Math-AA), and instruction (professional development manual and teacher survey about instruction) met the seven criteria for alignment.

Alignment Results by Criterion

Criterion 1: *The content is academic and includes the major domains/ strands of the content area as reflected in state and national standards (e.g., reading, math, science).*

> Outcome: Approximately 23% of the ELA and 11% of the Mathematics target skills were rated as not academic; however, most of the nonacademic skills were rated "access skills." The portfolio assessment as designed by the state allowed for access skills practiced within academic activities. Most of the ELA targeted skills were aligned to *reading* with few target skills linked to the other ELA domains. Most of the Mathematics target skills were aligned to *number and operations*.

Criterion 2: *The content is referenced to the student's assigned grade level (based on chronological age).*

> Outcome: For this second criterion, the focus was on alignment with the specific state curriculum standards for the content by grade bands in ELA and math. Originally this assessment permitted the target skills taught to the students to link to PreK-2 academic standards. A majority of the portfolios referenced grade-level standards, 68% for ELA and 63% for mathematics. The number of state content referenced was focused on *reading* in ELA and *number and operations* in Mathematics.

Criterion 3: *The achievement expectation is linked to the grade level content, but differs in depth or complexity; it is not grade level achievement. It may focus on prerequisite skills or those learned at earlier grades, but with applications to the grade level content. When applied to state level alternate assessments, these priorities are accessible to IEP planning teams.*

Outcome: As would be expected for an alternate assessment based on alternate achievement standards, the targeted skills reflect levels of cognitive demand that are less complex than grade level achievement but the targeted skills were aligned to the AA items/tasks. For ELA and Mathematics, categorical concurrence, balance, and range did not meet an acceptable level. Most of the portfolios focused on one content area (i.e., reading and number and operations) .

Criterion 4: *There is some differentiation in achievement across grade levels or grade bands*.

Outcome: There was no evidence of differentiation in achievement across grade bands. No differences were found in content of depth of knowledge between 3rd-5th and 6th – 8th grade bands.

Criterion 5: *The focus of achievement promotes access to the activities, materials, and settings typical of the grade level but with the accommodations, adaptations, and supports needed for individualization.*

Outcome: Between 19% and 25% of the evidence found in the portfolios were rated as not age appropriate. The context of most of the evidence in the portfolio was collected in a self-contained classroom.

Criterion 6: *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).*

Outcome: Of the portfolios rated as academic, the content and performance centrality of the alternate assessment targeted skills to grade level content standards suggested an adequate quality of alignment.

Criterion 7: *Multiple levels of access to the general curriculum are planned so that students with different levels of symbolic communication can demonstrate learning.*

Outcome: The alternate assessments contain targeted skills at all symbolic levels reflecting its accessibility for a wide range of students within this population. The professional development materials also contain examples at all symbolic levels although this specific terminology is not used. We recommend some state discussion of whether students below the symbolic level will/should be able to achieve proficiency on this alternate assessment with the number of items provided.

Portfolio Alignment Study

This alignment study was conducted on the basis of information obtained on the 2004-2005 Portfolio Assessment in July 2006 on the state portfolio-based English Language Arts (ELA) and mathematics (math) alternate assessments (AAs) for grades 3 through 8. This portfolio assessment system is being phased out and a new performance-based assessment is scheduled for full-scale use during the 2006-2007 academic year. One of the purposes of this study is to evaluate newly developed alignment criteria, which were developed by the UNC Charlotte partnership in the *National Alternate Assessment Center* (NAAC), on a portfolio-based AA system.

This report is organized by the seven criteria developed by a collaboration of content experts, special educators, and measurement experts at UNC Charlotte (Browder et al., 2006). While some of the alignment criteria are similar to other alignment methods (e.g., Webb, Surveys of Enacted Curriculum, and Achieve), some of the criteria (criteria 5-7) were designed specifically as value indicators for students with significant cognitive disabilities (See Table 1). An additional difference between this alignment protocol and other alignment methods is the examination of the targeted standards (i.e., standards intentionally selected for students with significant cognitive disabilities) and grade-level content standards. These results will inform decision makers about what content standards are being emphasized and what standards are being excluded for students with significant cognitive disabilities when compared with the general education population.

All reviewers were instructed on the purpose of alternate assessments and reviewed all the testing materials and academic content standards provided by the state. The content reviewers rated the alignment of AA items to content standards as a team until there was consensus. After both the content experts had consensus, they rated subsequent items independently. Independent ratings of some common items were used to evaluate inter-rater agreement. Special education experts rated the professional development materials, and the age appropriateness and symbolic levels of the targeted skills and alternate assessment items/tasks.

Portfolio Alternate Assessments

Portfolio AAs provide flexibility in the content and assessment items/tasks allowing teachers the opportunity to select the targeted skills in ELA and mathematics. Teachers were instructed to select one ELA and one mathematical target skill to assess their students. Because of the variability across student portfolios, a random sample of 133 portfolios was selected from approximately 1800 administered in 2004-05. Three portfolios were used to train content and special education experts, leaving 130 portfolios used to determine the alignment of alternate assessments to academic content standards. The grade levels of the portfolios are reported in the table below.

Table 1: Grade Levels of Portfolios

Grade	N	%
3	13	10.0
4	23	17.7
5	18	13.8
6	26	20.0
7	30	23.1
8	19	14.6
9	1	0.8

Alignment Team

The alignment team consisted of two English Language Arts (ELA) experts, two mathematics experts, two experts in the education of students with significant cognitive disabilities, and two measurement experts. Content experts had a range of experience in their content area of 10 to 31 years and special education experts had a range of 5-7 years. The level of education ranged from a bachelor's degree (1 content expert) to a doctoral degree (1 content expert). All experts had participated in conducting professional development related to their content area.

At the beginning of each alignment activity, the team worked together to come to a consensus on the alignment of educational components. When experts disagreed, decision rules were made to insure consistency. Then the reviewers independently rated a subset of items/standards/extended standards (i.e.,target skills) and agreement between raters was examined. When the raters agreed 100%, each rater was given specific tasks. Some of the tasks were overlapping to check for agreement between raters.

The range of interrater agreement for content experts across all portfolios was 62%-100% for ELA with a median score of 83% and a range of 43%-92% for math with a median score of 64%. An area of weakness for math occurred with the links to content and performance between the grade band content standard and the target skill. As the grade band content standard provided by the teacher was difficult to pinpoint (e.g., not grade specific, not identifiable, or not given) for many portfolios, the raters had great difficulty in coding the information. Overall interrater agreement for special education experts was 85%. Agreement on the ratings of the professional development materials was 93%. Finally, the dataset was cleaned with 20% of the portfolios checked for data entry errors. Data entry was 99.7% accurate for all items related to ELA and 99.6% accurate for all items related to math.

CRITERIA FOR ALIGNING ALTERNATE ASSESSMENTS TO GRADE LEVEL ACADEMIC CONTENT

Nonregulatory guidance has specified that alternate assessments "should be clearly related to grade-level content, although it may be restricted in scope or complexity or take the form of introductory or prerequisite skills" (U.S. Department of Education, 2005, p.26). As stated in this regulation, there should be a clear *link* to the content standards for the grade in which the student is enrolled. While this gives states flexibility to determining the scope and breadth of content of alternate assessments, it does not exempt states from designing assessments that measure an academic domain with interpretable results and accurately reflecting what the student knows and can do within that academic domain. For this reason, the authors believe that the investigation of alignment between academic content, academic performance, alternate assessments, and instructional practices and resources should be as strenuous as those used for the assessment of students in the general population. In contrast, it is also expected there would be some differences in the depth, breadth or complexity of content addressed when the achievement target is an alternative to grade level achievement. Because of the unique characteristics and needs of students with significant cognitive disabilities (e.g., testing formats and instructional practices), additional alignment criteria also need to be considered for alternate assessments.

In our conceptual framework, we propose seven criteria for linking to grade-level academic content standards (see Table 1). To be linked to grade level standards, the target for achievement must be academic content (e.g., reading, math, science) that is referenced to the student's assigned grade based on chronological age. Functional activities and materials may be used to promote understanding, but the target skills for student achievement are academically-focused. Some prioritization of the content will occur in setting this expectation, but it should reflect the major domains of the curricular area (e.g., strands of math) and have fidelity with this content and how it is typically taught in general education. The alternate expectation for achievement may focus on prerequisite skills or some partial attainment of the grade level, but students should still have the opportunity to meet high expectations, to demonstrate a range of cognitive demand, to achieve within their level of symbolic communication, and to show growth across grade levels or grade bands.

Table 1: *Criteria for Instruction and Assessment that Links to Grade Level Content*

1. The content is academic and includes the major domains/ strands of the content area as reflected in state and national standards (e.g., reading, math, science.)

2. The content is referenced to the student's assigned grade level (based on chronological age).

3. The achievement expectation is linked to the grade level content, but differs in depth or complexity; it is not grade level achievement. It may focus on prerequisite skills or those learned at earlier grades, but with applications to the grade level content. When applied to state level alternate assessments, these priorities are accessible to IEP planning teams.

4. There is some differentiation in achievement across grade levels or grade bands.

5. The focus of achievement promotes access to the activities, materials, and settings typical of the grade level but with the accommodations, adaptations, and supports needed for individualization.

6. 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).

7. Multiple levels of access to the general curriculum are planned so that students with different levels of symbolic communication can demonstrate learning.

Source: Browder, Wakeman, Flowers, Rickelman, Pugalee, & Karvonen, 2006

The following sections report the results of the pilot alignment method organized around the seven criteria, as applied to the state's portfolio alternate assessment system. In each section, results are reported for target skills and alternate assessments in ELA and math. Information about professional development and classroom instruction related to each criterion is provided at the end of each section.

Alignment Results by Criterion

<u>**Criterion 1**</u>**:** ***The content is academic and includes the major domains/ strands of the content area as reflected in state and national standards (e.g., reading, math, science).***

English Language Arts Alignment

All teacher-identified target skills and AA items were screened to determine if they were academic. One teacher did not identify a target skill and is excluded from the analyses. Some of the teachers (7 out of 129) identified more than one target skill. Coders randomly selected a single target skill using a table of random numbers for coding purposes. Of all the reported target skills, 31 (23%) were rated as not academic. Special education experts reviewed all the non-academic target skills and reported that 22 of the 30 were "access skills" which were acceptable by state standards as assessment skills. The alignment of the target skills to the components of the NCTE are reported in Table 2. Most of the target skills aligned to Reading (57%). A bar graph of the percentage of ELA components can be seen in Figure 1.

Table 2: ELA Target Skills

Components	Primary Codes of National Standards for Target Skills		Secondary Codes of National Standards for Target Skills	
	N	%	N	%
Reading	64	57.4	8	40
Writing	6	4.7	4	20
Speaking	8	6.2	0	0
Listening	5	3.9	3	15
Viewing/Visual	6	4.6	5	25
Research	0	0.0	0	0
Non-academic	31	23.3		

Note. 31 portfolios were non-academic or did not include a targeted skill.

Figure 1: Percentage of Targeted Skills by ELA Components
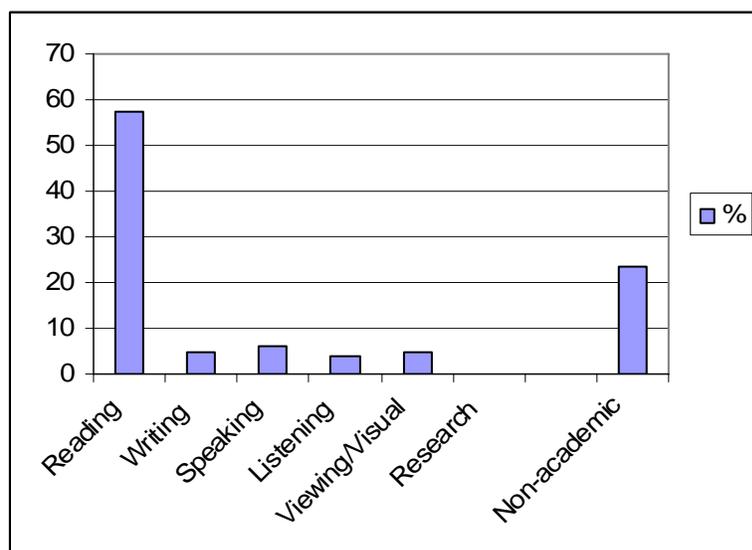
Further analyses of the Reading items' alignment to the National Reading Panel standards indicated that most reading items/tasks were aligned to Vocabulary (*n=56, 75%*), Comprehension (*n=12, 16%*) with few items aligned to Phonics (*n=4, 5%*), Phonemic Awareness (*n=1, 1%*) and Fluency (*n=1, 1%*).

Of the 130 portfolios, 99 (76.2%) of the portfolios contained some academic ELA items/tasks. An evaluation of the 99 portfolios rated as containing some academic items/task, there was an average of 18.4 ELA items/task per portfolio and 16 of the items were rated as academic, resulting in an average of 87% of the items being rated as academic.

Mathematical Targeted Skills

Eight of 130 portfolios had more than one target skill. One of the portfolios did not list a targeted skill. Approximately 10% (13) of the target skills were rated as not academic. The alignment of the target skills to the NCTE strands are reported in Table 3. Most of the target skills aligned to Number and Operations (75%).

Table 3: Mathematical Targeted Skill

Components	Primary Codes of National Standards for Target Skills		Secondary Codes of National Standards for Target Skills	
	N	%	N	%
Number and Operations	98	75.4	3	60
Algebra	0	0.0	0	
Geometry	1	0.8	0	
Measurement	12	9.2	2	40

Data/Probability	5	3.8	0
Non-academic	13	10.8	

Figure 2: Percentage of Targeted Skills Ratings within mathematics Strand
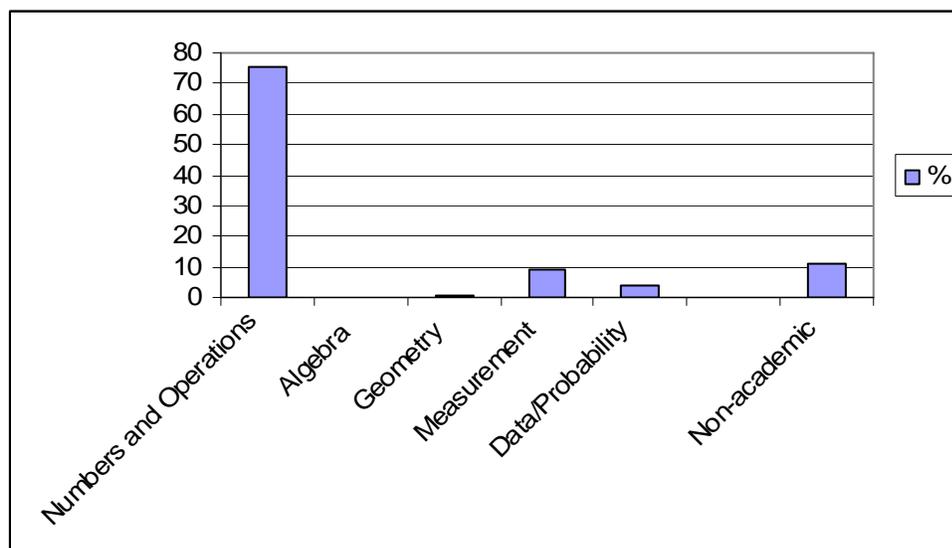
On average, there were 16.66 (SD=7.68) math AA items/task per portfolio ranging from 2 to 40; an average of 14.36 (SD=7.73) items were rated as academic, resulting in 86% of math items/task being academic.

Professional Development Activities Alignment to Academics

Review of Lead Teacher Training Material

Two experts in special education reviewed the professional development PowerPoint presentation that was used to train lead teacher on portfolio AAs. The experts were asked to code for any examples of the inclusion of major domains of ELA and mathematics. The expert ratings are found in the following table. Only one example could be found in the presentation (pp. 15-16) and it was aligned to Reading Comprehension. No other examples academic content was found in the presentation.

The content is academic and includes the major domains/strands of the content area as reflected in state and national standards.	Expert Rating
• Examples given for teaching st.stands.to stud. w/SCD prim.acad.?	NO
• Do they include all maj.domains of ELA as refl.in nat'l/st.standards?	NO
Reading	
• Comprehension	NO
• Fluency	NO
• Vocabulary	NO
• Phonics	NO
• Phonemic Awareness	NO

•	Writing	NO
•	Speaking	NO
•	Listening	NO
•	Viewing/visually representing	NO
•	Conducting research	NO
•	Other state standards	NO
Math		
•	Number and Operations	NO
•	Algebra	NO
•	Geometry	NO
•	Measurement	NO
•	Data analysis and probability	NO

Two special education experts examined the extent to which the manual, *Teaching to the Standards: A Guide for Teachers,* promoted access to the general curriculum. All ten national components or standards of ELA (including five from NCTE and five from the National Reading Panel) except the NRP component of Fluency, were found in the resource. All five NCTM strands were also represented. There was a broad breadth in covering all content domains. Fluency may not be a priority for this population given the emergent literacy level of most of the reading activities; adding a rationale for omitting this component may be appropriate.

Criterion 2: *The content is referenced to the student's assigned grade level (based on chronological age).*

In the first criterion, the focus was on the match between interpretation of the targeted skills, the alternate assessment, and professional development with national strands of content to answer the broad question, "Is it academic?" In this second step, the focus is on the alignment with the state's own standards to ask the question, "Is it grade level content?" The USDOE Nonregulatory Guidance permits a focus on grade bands versus grade specific content for alternate assessments (August, 2005).

ELA Results

A total of 91 of 130 (68.5%) portfolios had targeted skills *referenced to* grade-level content standards but 26 of the 91 targeted skills were rated as *not linked* to grade-level content standards, resulting in 50% (*n=65*) of all the portfolios linked to the student's assigned grade level. The content centrality of the link between the targeted skills and the grade-level content standards are reported in the following table.

Table 4: Quality of Link between Targeted Skills and Grade-level Content Standards

Content Centrality	N
No Link	26
Far Link	22
Near Link	43

Many teachers referenced more than one grade-level content standard for each target skill. Only the first referenced content standard was examined in the following analyses. The alignment of the targeted skills to the state ELA content standards is reported in Table 5. Most of the targeted skills were aligned to *Reading process and comprehension* (52.3%) followed by *Phonic and word study* (29.2%). Very few target skills were aligned to any of the other ELA state content standards.

Table 5: Alignment of Targeted Skill to State ELA Content Standards

State Standard	N	%
Reading 1: Reading process and comprehension	34	52.3
Reading 2: Analysis of texts	0	0
Reading 3: Phonics and word study, word study and analysis	19	29.2
Writing 1: Writing process	2	3.1
Writing 2: Writing purposes	3	4.6
Writing 3: Responding to texts	2	3.1
Writing 4: Legibility	0	1.5
Communication 1: Speaking	2	3.1

Communication 2: Listening	1	1.5
Communication 3: Viewing	1	1.5
Research 1: Selecting a research topic	0	0
Research 2: Gathering information and refining a topic	1	1.5
Research 3: Preparing and presenting information	0	0

Mathematics Results

A total of 82 of 130 (63%) portfolios referenced state mathematics content standards. Content experts reported that five of the 82 target skills were not linked to the grade-level content standards. The content centrality of the target skills to the state content standards is reported in the following table.

Table 6: Quality of Link between Target Skills and Grade-level Content Standards

Content Centrality	N
No Link	5
Far Link	38
Near Link	39

The alignment of the target skills to the state content standards is listed in Table 7. Over 80% of the targeted skills are aligned to Number and Operations standard 1 (*Understand number, ways of representing number, relationships among number, and number systems*).

Table 7: Alignment of Targeted Skills to State mathematical Content Standards

State Standards	N	%
Number and Operations 1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems	61	79.2
Number and Operations 2: Understand meanings of operations and how they relate to one another	1	1.3
Number and Operations 3: Compute fluently and make reasonable estimates	8	10.4
Algebra 5: Understand patterns, relations, and functions	1	1.3
Measurement 1: Understand measurable attributes of objects and the units, systems, and processes of measurement	2	2.6
Measurement 2: Apply appropriate techniques, tools, and formulas to determine measurements.	1	1.3
Data 1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	3	3.9

Instructional Links to Grade Level State Standards

   For criterion 2, the reviewers considered whether the information provided in the professional development manual promoted clear links to state standards. The drafted manual addressed curriculum standards for ELA and math at the PreK-2 levels only. Information for teachers on classroom activities and IEP guidance about creating the link for this grade band was included in the manual.

Criterion 3: *The achievement expectation is linked to the grade level content, but differs in depth or complexity; it is not grade level achievement. It may focus on prerequisite skills or those learned at earlier grades, but with applications to the grade level content. When applied to state level alternate assessments, these priorities are accessible to IEP planning teams.*

Using the content experts coding, statistics for categorical concurrence, depth of knowledge, range-of-knowledge correspondence, and balance of representation are reported (Webb, 1997).

ELA Results

Approximately 50% of the teachers created target skills that were aligned to the grade level content standards. The number of target skills linked to grade level ELA categories is reported in the following table. The category of Reading (81.5%) was the most targeted category. The second highest rated category was writing (10.8%). Only one of the four ELA categories is consistently targeted, resulting in a categorical concurrence of 25%. The target skills have limited range (25%) and balance (.43) across the grade level content standards.

*Table 8: Alignment of Target Skills Aligned to ELA Categories*

Category	N	%
Reading	53	81.5
Writing	7	10.8
Communication	4	6.2
Research	1	1.5

The level of cognitive demand for the lowest and highest AA item/tasks in a portfolio, target skill, and the state Content Standards for grade bands 3rd-5th and 6th-8th are reported in Table 9. For AA items/tasks and target skills, a majority of the items/tasks and target skills were rated in the lowest level for depth of knowledge (attention, memorize/recall), with no items/tasks rated in the higher levels of depth of knowledge (application, analysis/synthesis/evaluation). AA-items/tasks were a similar DOK as the target standards, with 79.2% at the same level as the target skill, 1.3% below the target skill, and 19.5% above the target skill. As expected, the target skills were much lower than the 3rd-5th grade band ELA content standards, with 24% at the same DOK, 62.6% at a lower DOK, and 13.4% above the DOK as the target skill.

Table 9: DOK of ELA AA Items/Task (lowest and highest level), Target Skills, and Grade Band Content Standards

	AA Lowest		AA Highest		Target Skill		CS Grades 3-5		CS Grades 6-8	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Attention	21	21.6	3	3.6	8	7.1	0	0	0	0
Memorize/Recall	67	69.1	37	44.6	64	57.1	7	2.7	7	2.5
Performance	8	8.2	35	42.2	28	25.0	28	10.6	9	3.2
Comprehension	1	1.0	8	9.6	12	10.7	42	16.0	27	9.6
Application	0	0	0	0	0	0	93	35.4	120	42.6
Analysis/Synthesis/ Evaluation	0	0	0	0	0	0	93	35.4	119	42.2

Figure 3: Percentage Depth of Knowledge for AA Items/Tasks, Target Skill, and Grade Band Content Standards
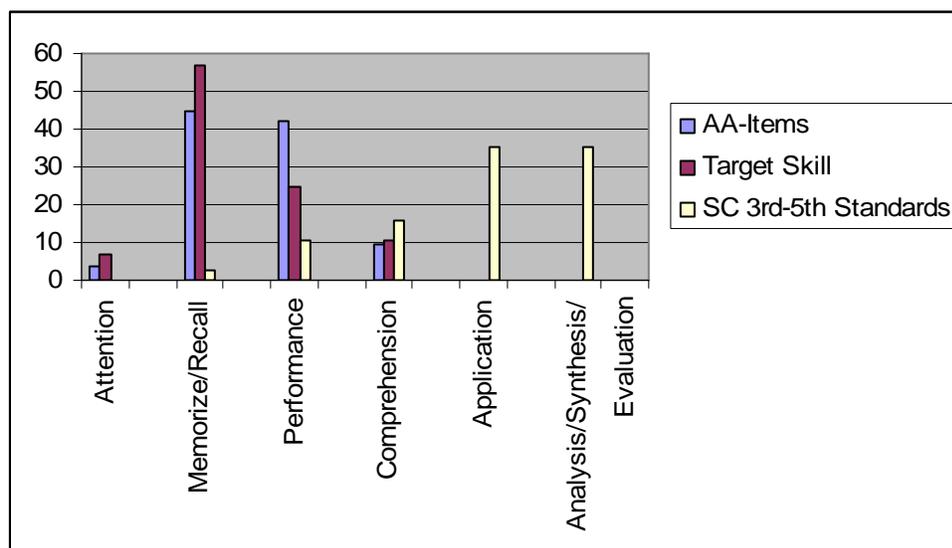
Mathematics Results

Approximately 59% of the teachers created target skills that were linked to the grade level content standards. The number of target skills linked to grade level mathematics categories is reported in the following table. The category of Number and Operations (90.9%) was the most targeted category. The second highest rated categories were Measurement and Data/Probability (3.9%). Only one of the five mathematics categories was consistently linked, resulting in a

categorical concurrence of 20%. The target skills have limited range (20%) and balance (.29) across the grade level content standards.

*Table 10: Alignment of Target Skills Aligned to Mathematics Categories*

Category	N	%
Number	70	90.9
Algebra	1	1.3
Geometry	0	0.0
Measurement	3	3.9
Data/Probability	3	3.9

The level of DOK for the lowest and highest AA mathematics item/tasks in a portfolio, target skill, the state content standards for grade bands 3rd-5th and 6th-8th are reported in Table 11. Some of the AA items/tasks (4.3%) were rated at the highest level of DOK (analysis/synthesis/evaluation). AA-items/tasks were a similar DOK as the targeted standards, with 83.5% at the same level as the target skill, 8.8% below the target skill, and 7.7% above the target skill. As expected, the target skills were much lower than the 3rd-5th grade band ELA content standards, with 35.2% at the same DOK, 60.6% at a lower DOK, and 4.24% above the DOK as the target skill.

Table 11: DOK of Mathematics AA Items/Task (lowest and highest level), Target Skills, and Grade Band Content Standards

	AA Lowest		AA Highest		Target Skill		CS Grades 3-5		CS Grades 6-8	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
Attention	21	17.8	1	.9	1	0.9	0	0	0	0
Memorize/Recall	66	55.9	18	15.4	33	30.6	27	11.3	5	3.1
Performance	29	24.5	70	59.8	55	50.9	15	6.3	2	1.2
Comprehension	0	0	5	4.3	1	0.9	51	21.3	23	14.3
Application	2	1.7	18	15.4	18	16.7	88	36.7	63	39.1
Analysis/Synthesis/ Evaluation	0	0	5	4.3	0	0	59	24.6	67	41.6

Figure 4: Percentage Depth of Knowledge for AA Items/Tasks, Target Skill, and Grade Band Content Standards
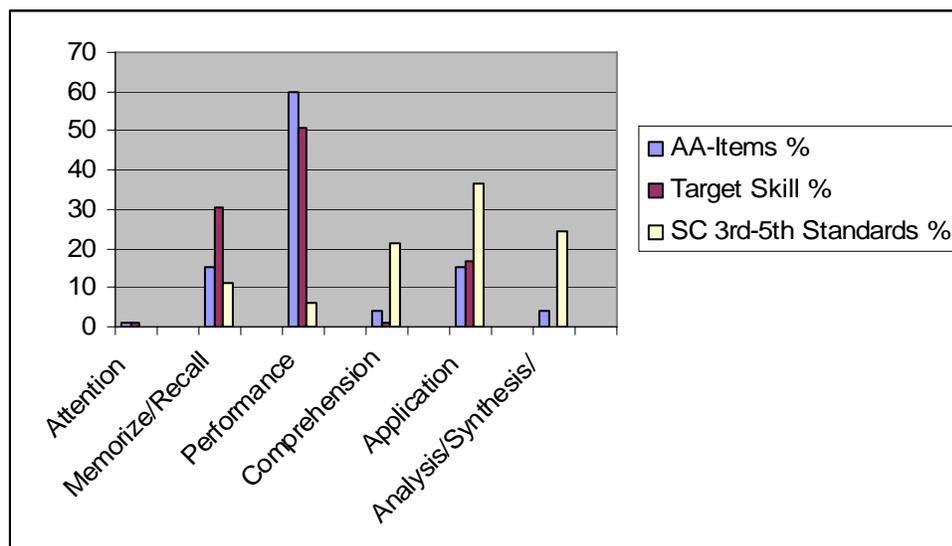
Professional Development

Two experts in Special Education reviewed the lead teacher presentation materials that were used to train lead teachers on portfolio AAs. The experts were asked to find evidence of K-12 state content standards in the presentation. The following table provides the guiding questions and the experts coding.

Question	Present?
Overarching K-12 state standards in the guide?	No
Standards stated on same pgs. as examples for stud. w/SCD?	No
all overaching ELA standards included?	No
all overarching math standards included?	No
Are the content standards stated in the guide?	No
con.standards stated on same pgs. as examples for stud. w/SCD?	No
all of ELA con. standards included?	No
all of math standards included?	No
What grade levels are included?	No
GL Perf. Stand./Learning Expec.stated in guide?	No
GL perf.stand.on same pags as examples for stud. w/SCD?	No
What grade levels are included?	No
Extended standards provided for academic content standards?	No
extended standards for all ELA content standards?	No
extended standards for all math content standards?	No
what grade levels or grade bands are provided?	No
Types of instructional resources included in guide	No
Background info on standards based instruction	Yes
classroom activities	No

students products/assessment suggestions	Yes
IEP development guidance	No

In this third criterion, the consideration is breadth and complexity of coverage of the grade level content reflected in instruction. The examples given in the resource guide were grade level content for PK-2 and did differ from grade level achievement. However, because the manual only addressed one grade band, further analysis could not be conducted.

<div align="center">Alignment of Teacher-Reported Instruction in ELA and Math</div>

Each teacher completed Part II of the Curriculum Indicators Survey in ELA and math based on instruction for just one of their students. Each teacher first identified several students in their class with various levels of symbolic communication. Using a purposeful sampling strategy designed to maximize variability in student communication levels across the grade span, one teacher completed the survey for a student at the awareness level, two each completed the survey for students at the pre-symbolic and early symbolic levels, and the remaining three teachers responded about a student at the symbolic communication level. Teachers rated the intensity of coverage of specific items, and the highest performance expectation (level of cognitive demand) of that student during the academic year. The academic content experts coded the CIS topics according to NCTE and NCTM standards, and to state's curriculum strands in ELA and math. Thus, results reported in this section reflect alignment at a coarse grain (i.e., CIS topic to the state's strand), not at a fine grain (i.e., CIS items to specific state objectives).

ELA. The CIS responses revealed that in ELA, the majority of instructional emphasis was on Reading, followed by Communication (see Table 12). In general, teachers identified a greater emphasis on the lower levels of cognitive demand as the highest performance expectation for the target student in 2005-06.

Table 12: *Percent of ELA instructional time reported, by state Curriculum Strand and level of cognitive demand*

	Attention	Memorize /Recall	Perform	Compre-hend	Apply	Analyze, synthesize, evaluate
Reading	35	12	20	3	5	
Writing	1	0.5	0.7	1	0.6	
Communication	15	2	2.5		0.5	
Research	1					

To understand the alignment between instruction and the ELA-AA items, the proportion of instructional emphasis in each cell (converted from the table above) was compared with the proportional coverage of the ELA-AA items rated by experts (see Table 13). Information was aggregated at the strand level consistent with state Curriculum Standards. Positive numbers in the table below indicate greater emphasis in instruction than on the alternate assessment. For instance, teachers' self-reported coverage of reading at the attention level was approximately 34 percentage points greater than the emphasis seen in the ELA-AA items on that topic and at that level of cognitive demand. While the ELA AA had no items listed as primarily linked to the Research strand, there was a small amount of instructional coverage of that topic at the attention level. The overall alignment index, calculated based on the Surveys of Enacted Curriculum method, was .35 for the ELA matrix. The matrix may range from 0 to 1.0, with a higher number indicating a greater degree of overall alignment.

Table 13: *Discrepancy between AA ELA and teacher-reported ELA instruction, by state Curriculum Strand and level of cognitive demand (CIS – AA)*

	Attention	Memorize /Recall	Perform	Compre- hend	Apply	Analyze, synthesize , evaluate
Reading	.34	-.21	.16	-.10	-.02	-.06
Writing	.01	-.05	-.06	.01	-.03	-
Communication	.13	-.05	-.02	-.06	-.04	-.02
Research	.01	-	-	-	-	-

Note. - Indicates no coverage on CIS or AA

Math. The procedures used to determine ELA topic coverage were also applied to mathematics coverage, with topics categorized according to the five strands in the state Math Curriculum Standards. Again, the majority of instructional time was devoted to the lowest level of cognitive demand, with content emphases on number and operations and on measurement (see Table 14).

Table 14: *Percent of mathematics instructional time reported, by state Math strand and level of cognitive demand*

	Attention	Memorize /Recall	Perform	Compre- hend	Apply	Analyze, synthesize, evaluate
Number & Operations	26	5	16	2	2	

Algebra	6	2	1	1	1
Geometry	4	2			2
Measurement	16		4		
Probability	4		4		

In comparing instructional coverage with the math AA, there were slight discrepancies (.05 or less) in many of the cells. Larger differences were seen in Number & Operations; in the lower cognitive levels within the Measurement strand; and in the Geometry strand (see Table 15). The overall alignment index was 0.28, on a scale from 0 to 1.0.

Table 15: *Discrepancy between AA math and teacher-reported math instruction, by state Math strand and level of cognitive demand (CIS – AA)*

	Attention	Memorize /Recall	Perform	Compre- hend	Apply	Analyze, synthesize , evaluate
Number & Operations	.26	-.15	.08	-.01	-.03	-.06
Algebra	.06	.02	.01	.01	.01	-
Geometry	.03	-.16	-.06	-	.01	-.01
Measurement	.16	-.12	0	-.03	-.01	-
Probability	.04	-.02	.02	-.02	-	-.05

Note. - Indicates no coverage on CIS or AA

Criterion 4: *There is some differentiation in achievement across grade levels or grade bands*.

In the following analyses, differences between grade-bands on the cognitive demand and National Academic Content strands of the targeted standards were examined.

<div align="center">ELA Grade-band Differentiation</div>

The number and percentage of ELA target skills' DOK by grade-bands are reported in the following table. There was no relationship between the DOK and grade band (χ^2 =2.06, *p*=.56) suggesting that there were no changes in the DOK between the grade bands of 3rd-5th and 6th-9th.

Table 16: ELA DOK by Grade Bands

		Attention	Memorize /Recall	Performance	Comprehension	Application	Analysis/ Synthesis/ Evaluation
Grades 3-5	N	0	17	10	2	0	0
	%	0	58.6	34.5	6.9	0.0	.00
Grades 6-9	N	1	19	9	5	0	0
	%	2.9	55.9	26.5	14.7	0.0	.00

The number and percentage of ELA target skills' by content strand are reported in the table below. There were no differences in content area linked across the two grade bands.

Table 17: ELA Content Area by Grade Bands

		Reading	Writing	Speaking	Listening	Viewing	Research
Grades 3-5	N	21	1	5	1	1	0
	%	72.4	3.4	17.2	3.4	3.4	0
Grades 6-9	N	31	0	6	0	3	1
	%	75.6	0.0	14.6	0.0	7.3	2.4

<div align="center">Mathematics Grade-band Differentiation</div>

The number of mathematics target skills by grade-bands is reported in the following table. The DOK levels were collapsed into two categories, low (attention and memorize/recall) and high (performance, comprehension, application & analysis), to allow for a sufficient sample size in each cell. There was no relationship between the DOK and grade band (χ^2 =.12, *p*=.83) suggesting that there were no changes in the DOK of the grade bands of 3rd-5th and 6th-9th.

Table 18: Mathematics DOK by Grade Bands

		Attention	Memorize /Recall	Performance	Comprehension	Application	Analysis/ Synthesis/ Evaluation
Grades 3-5	N	0	15	23	1	6	0
	%	.00	33.33	51.11	2.22	13.33	.00
Grades 6-9	N	1	18	32	0	12	0
	%	1.59	28.57	50.79	.00	19.05	.00

The following table reports the number and percentage of target skills at the different grade-bands. There was no difference between the grade-bands and the content covered.

Table 19: Mathematics Content Area by Grade Bands

		Number	Algebra	Geometry	Measurement	Data
Grades 3-5	N	42	0	4	3	0
	%	85.7	0.0	8.2	6.1	0.0
Grades 6-9	N	56	0	8	1	1
	%	83.6	0.0	11.9	1.5	1.5

Teaching to the Standards Manual

The professional development manual, currently in revision, do not yet give teaching examples of how a state standard is addressed with increased expectations across grade bands. For example, teachers may need examples of how the skills expected for a student listening to a story in the elementary grades may differ from the skills expected of middle school student.

Criterion 5: *The focus of achievement promotes access to the activities, materials, and settings typical of the grade level but with the accommodations, adaptations, and supports needed for individualization.*

The special education experts reviewed all the ELA and mathematics AA items/tasks and evidence provided in the portfolios and rated the age appropriateness and the context (e.g., self-contained, resources, community, general education, & other). The following table reports the age appropriateness of the ELA and mathematics items/tasks and evidence in the portfolio. For ELA, approximately one-third of the evidence was rated as "all" or "some" work that was age appropriate. Approximately 20% was not age appropriate and 11% provided no evidence in the portfolio. For mathematics, about one-fourth of the evidence was not age appropriate and almost 40% was "all" age appropriate.

Table 20: Age Appropriateness of AA Items/Task and Portfolio Evidence

Rating	ELA		Math	
	N	*%*	*N*	*%*
No work age appropriate	19	19.0	29	25.2
Some work age appropriate	33	33.0	28	24.3
All work age appropriate	37	37.0	43	37.4
No work present	11	11.0	15	13.0

The following table reports the context of the evidence. In ELA and mathematics, approximately half of the evidence was produced in the context of the self-contained classroom. Evidence from the community was less than 10% for both ELA and mathematics. Approximately 5% of the evidence was collected in the context of the general education classroom.

Table 21: Context of AA Items/Task and Portfolio Evidence

Context	ELA		Math	
	N	*%*	*N*	*%*
Self-Contained	95	47.0	104	49.1
Resource	0	0.0	0	0.0
Community	17	8.4	19	9.0
General Education	12	5.9	11	5.2
Other	78	38.6	78	36.8

The professional development manual did not illustrate how to take a grade level activity/material and adapt it for students with significant cognitive disabilities. For example, the manual might illustrate how to take an 8th grade novel and adapt the story for students listening comprehension level. There was some information on teaching in inclusive settings.

On the teacher survey (CIS), specific content items were not linked to grade band state Curriculum Standards. However, teachers indicated a grade level or grade band from which materials, activities, and contexts were adapted for all academic content taught. While the eight

students on whom survey responses were based were assigned to grades 2-12, teachers primarily reported adapting materials from the PreK-2 grade band. In math, one teacher reported some pre-vocational curriculum materials. While this emphasis on PreK-2 may illustrate the effectiveness of earlier professional development (i.e., teachers learned how to adapt from the manual that emphasized PreK-2 standards), the use of K-2 materials with students in higher grade levels may lead to misalignment of instruction with alternate assessments and target skills.

Criterion 6: *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).*

The ELA and mathematics experts reviewed each target skill and the state performance indictor, as indicated by the state, being assessed and rated the content (no link, far link, and near link) and performance centrality (no, some, yes). The percentages and numbers of AA target skills within each of the content and performance centrality categories are reported.

For ELA content centrality, approximately half of the target skills were rated as a near link and one-fourth of the target skills were rated as a far link.

Table 22: ELA Content Centrality

Content Centrality	N	%
No Link	26	28.6
Far Link	22	24.2
Near Link	43	47.3

For ELA performance centrality, the results are reported in Table 23. Approximately half of the target skills had a similar performance levels as found in the state standards with the remaining target skills rated at the "same" and only 7.7% rated 'no.'

Table 23: ELA Performance Centrality

Performance Centrality	N	%
No	5	7.7
Some	27	41.5
Yes	33	50.8

The alignment of the mathematics target skills to the grade-level content standards is reported in Table 24. Five (6.1%) of the target skills lacked adequate content centrality; the majority of the math target skills had a far and near links to grade-level content standards.

Table 24: Mathematics Content Centrality

Content Centrality	N	%
No Link	5	6.1
Far Link	38	46.3
Near Link	39	47.6

For mathematics performance centrality, the results are reported in Table 25. Most of the target skills were rated as some or similar performance levels as found in the state standards with only six (7%) rated 'no.'

Table 24: ELA Performance Centrality

Performance Centrality	N	%
No	6	7.2
Some	42	50.6
Yes	35	42.2

Criterion 7: *Multiple levels of access to the general curriculum are planned so that students with different levels of symbolic communication can demonstrate learning.*

The AAs were rated using four levels of symbolic communication (see Table below for definitions of the levels). The lowest level of symbolic communication a student could use and still respond to the item was rated. Four symbolic levels were used to define accessibility of alternate assessment items, Awareness, Presymbolic, Early Symbolic, and Symbolic. A description of each of these levels is reported in Table 25.

Table 25: Symbolic Levels

Awareness: Has no clear response and no objective in communication
Pre-symbolic: Communicates with gestures, eye gaze, purposeful moving to object, sounds
Early Symbolic: Beginning to use pictures or other symbols (less than 10) to communicate within a limited vocabulary
Symbolic: Speaks or has vocabulary of signs, pictures to communicate. Recognizes some sight words, numbers, etc.

The results of the number and percentage of ELA and math AA items by the symbolic level are reported in Table 26. An overwhelming majority of the items were symbolic, 84.8% for ELA and 80.3% for math. Although skewed toward the symbolic level, it should be noted that this assessments included items for students at all symbolic levels and thus provided multiple levels of access.

Table 26: Symbolic Level of AA Items/Task

	Awareness		Presymbolic		Early Symbolic		Symbolic	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*
ELA	78	7.1	52	4.7	38	3.4	934	84.8
Math	61	6.4	61	6.4	66	6.9	768	80.3