

National Assessment Governing Board Committee on Standards, Design and Methodology

**August 1, 2014
9:45 am – 12:30 pm**

AGENDA

9:45 – 10:45 am	<p>NAEP Testing and Reporting on Students with Disabilities and English Language Learners <i>Lou Fabrizio, COSDAM Chair</i> <i>Andrés Alonso, R&D Chair</i> <i>Grady Wilburn, NCES</i> [Joint meeting with Reporting and Dissemination]</p>	Attachment A
10:45 – 10:55 am	Break	
10:55 – 11:00 am	<p>Introductions and Review of Agenda <i>Lou Fabrizio, COSDAM Chair</i></p>	
11:00 – 11:30 am	<p>ACTION: Technology and Engineering Literacy (TEL) Achievement Levels Descriptions <i>Lou Fabrizio, COSDAM Chair</i> <i>Edys Quellmalz, WestEd</i></p>	Attachment B
11:30 am – 12:10 pm	<p>TEL Achievement Levels Setting Contract <i>Paul Nichols, Pearson</i></p>	Attachment C
12:10 – 12:20 pm	<p>The Future of Academic Preparedness Research <i>David Driscoll, Chairman of the Board</i></p>	
12:20 – 12:25 pm	<p>Questions on Information Items <i>Sharyn Rosenberg, NAGB Staff</i></p>	See below
12:25 – 12:30 pm	<p>Other Issues and Questions <i>COSDAM Members</i></p>	
	<p>Information Items:</p> <ul style="list-style-type: none"> • Update on Academic Preparedness Research • Development of White Paper on Maintaining Trends During Transition to Technology Based Assessments • Update on Evaluation of NAEP Achievement Levels Procurement 	<p>Attachment D</p> <p>Attachment E</p> <p>Attachment F</p>

NAEP Testing and Reporting on Students with Disabilities

In this joint session, the Committee on Standards, Design, and Methodology (COSDAM) and Reporting and Dissemination Committee (R&D) will discuss a proposed edit to the 2010 Board policy on NAEP Testing and Reporting on Students with Disabilities and English Language Learners, as well as alternatives to the policy for adjusting scores for students excluded from taking the National Assessment of Educational Progress (NAEP). The proposal addresses concerns about a particular part of the policy not being implemented and the possible impact the policy could have on students and schools involved in NAEP. A brief history and background are below.

The Policy In Brief

The March 2010 Governing Board policy on NAEP Testing and Reporting on Students with Disabilities (SD) and English Language Learners (ELL) was intended to reduce exclusion rates and provide more consistency across jurisdictions in which students are tested on NAEP. The policy promoted sound reporting of comparisons and trends (the policy statement is included as Attachment B2). The policy limits the grounds on which schools can exclude students from NAEP samples to two categories—for SD, only those with the most significant cognitive disabilities, and for ELL, only those who have been in U.S. schools for less than a year. Previously, schools excluded students with Individualized Education Programs (IEPs) that called for accommodations on state tests that NAEP does not allow, primarily the read-aloud accommodation on the Reading assessment. Under the current Board policy, schools could not decide to exclude students whose IEPs for state tests specify an accommodation not allowed on NAEP. Instead, such students had to take NAEP with allowable accommodations. Additionally, parents and educators were encouraged to permit them to do so, given that NAEP provides no scores and causes no consequences for individuals, but needs fully representative samples to produce valid results for the groups on which it reports. By law, individual participation in NAEP is voluntary and parents may withdraw their children for any reason.

Inclusion Rates and Implementation

During the December 2013 Board meeting, COSDAM and R&D met in joint session to discuss the 2013 student participation data for grades 4 and 8 Reading and Mathematics. There had been large increases in inclusion rates over the past ten years, and the Board's first inclusion rate goal—95 percent of all students in each sample—was met in almost all states in 2013. However, 11 states and eight districts failed to meet the Board's second goal of testing at least 85 percent of students identified as SD or ELL. Contrary to Board policy, NCES has continued to permit schools to exclude students whose IEPs called for accommodations that NAEP does not allow. NCES believes changing this practice could possibly be detrimental to students, increase refusals, change NAEP's target population, and be counter to current statistical procedures. The Committees asked the staffs of NAGB and NCES to consider possible policy and operational changes and what their impact might be, as well as a timeline for possible Board action.

The staffs of NAGB and NCES have had several conversations about the implementation of the SD/ELL policy. The policy could be clarified by revising the language about converting excluded students to refusals. The fourth implementation guideline for students with disabilities states, *"Students refusing to take the assessment because a particular accommodation is not allowed should not be classified as exclusions but placed in the category of refusals under NAEP*

data analysis procedures.” NCES asserts that it is technically incorrect to apply a weight class adjustment¹ that combines students who did not participate due to receiving accommodations on their state tests that are not allowed on NAEP with students who refused for other reasons. The former group cannot be assumed to be randomly missing, which is a necessary assumption for the current NAEP statistical procedures.

Policy Alternatives and Moving Forward

In the May 2014 COSDAM session, Grady Wilburn of NCES and Rochelle Michel from Educational Testing Service (ETS) presented three alternative methods for adjusting scores for students who were excluded from NAEP, contrary to the Board policy:

- *“Expanded” population estimates.* Improving upon the methodology of the full population estimates (FPEs) and incorporating additional data from NAEP teacher and school contextual questionnaires and from school records (e.g., state test scores for individual students).
- *Modified participation A.* Administering only the contextual questionnaire to excluded students and using that additional information to predict how the students would have performed on the cognitive items.
- *Modified participation B.* Administering the contextual questionnaire in the selected subject (i.e., Reading) in conjunction with an assessment in a different subject (e.g., Mathematics) and using both sources of information to predict how the students would have done on the Reading assessment.

COSDAM members expressed serious reservations about implementing any of the three procedures due to the following reasons: current concerns about collecting student data; the potential for jeopardizing trend reporting; increased costs; and the threat of depressing scores due to a change in the population of tested students. There was general consensus that NCES’ current practices on this particular aspect of the policy—encouraging schools to include more students in NAEP even when they receive accommodations on their state tests that are not allowed on NAEP, but still allowing schools to exclude such students if they insist—was acceptable.

The Committee asked whether it is possible to identify students who *do* take the NAEP Reading assessment despite receiving a read-aloud accommodation on their state tests. Peggy Carr, Associate Commissioner of NCES, noted that the SD questionnaire will be modified for 2015 to capture this information. The Committee agreed with a suggestion from member Andrew Ho that, instead of classifying students as refusals when they do not take the assessment because a particular accommodation is not allowed, the policy be edited to reflect that the number of such students be tracked and minimized to the extent feasible.

At this August 1 joint session, COSDAM and R&D members will discuss proposed edits to the policy to address ongoing concerns and questions about implementation.

¹ This refers to a set of units (e.g., schools or students) that are grouped together for the purpose of calculating nonresponse adjustments. The units are homogeneous with respect to certain unit characteristics, such as school size, location, public/private, student's age, sex, and student disability status.

Materials

The March 2010 Board policy on NAEP Testing and Reporting on Students with Disabilities and English Language Learners, with the proposed edit	Pages 5-10
An excerpt of the 2015 NAEP Questionnaire about Students with Disabilities	Page 11
2013 national and state inclusion rates for NAEP Reading, grades 4 and 8	Pages 12-13
2013 TUDA inclusion rates for NAEP Reading, grades 4 and 8	Page 14
2013 national and state inclusion rates for NAEP Mathematics, grades 4 and 8	Pages 15-16
2013 TUDA inclusion rates for NAEP Mathematics, grades 4 and 8	Page 17
Minutes from the May 2014 COSDAM session on this topic	Pages 18-19
Minutes from the December 2013 Joint COSDAM and R&D session on this topic	Pages 20-22



Adopted: March 6, 2010

National Assessment Governing Board

NAEP Testing and Reporting on Students with Disabilities and English Language Learners

Policy Statement

INTRODUCTION

To serve as the Nation's Report Card, the National Assessment of Educational Progress (NAEP) must produce valid, comparable data on the academic achievement of American students. Public confidence in NAEP results must be high. But in recent years it has been threatened by continuing, substantial variations in exclusion rates for students with disabilities (SD) and English language learners (ELL) among the states and urban districts taking part.

Student participation in NAEP is voluntary, and the assessment is prohibited by law from providing results for individual children or schools. But NAEP's national, state, and district results are closely scrutinized, and the National Assessment Governing Board (NAGB) believes NAEP must act affirmatively to ensure that the samples reported are truly representative and that public confidence is maintained.

To ensure that NAEP is fully representative, a very high proportion of the students selected must participate in its samples, including students with disabilities and English language learners. Exclusion of such students must be minimized; they should be counted in the Nation's Report Card. Accommodations should be offered to make the assessment accessible, but these changes from standard test administration procedures should not alter the knowledge and skills being assessed.

The following policies and guidelines are based on recommendations by expert panels convened by the Governing Board to propose uniform national rules for NAEP testing of SD and ELL students. The Board has also taken into consideration the views expressed in a wide range of public comment and in detailed analyses provided by the National Center for Education Statistics, which is responsible for conducting the assessment under the policy guidance of the Board. The policies are presented not as statistically-derived standards but as policy guidelines intended to maximize student participation, minimize the potential for bias, promote fair comparisons, and maintain trends. They signify the Board's strong belief that NAEP must retain public confidence that it is fair and fully-representative of the jurisdictions and groups on which the assessment reports.

POLICY PRINCIPLES

1. As many students as possible should be encouraged to participate in the National Assessment. Accommodations should be offered, if necessary, to enable students with disabilities and English language learners to participate, but should not alter the constructs assessed, as defined in assessment frameworks approved by the National Assessment Governing Board.
2. To attain comparable inclusion rates across states and districts, special efforts should be made to inform and solicit the cooperation of state and local officials, including school personnel who decide upon the participation of individual students.
3. The proportion of all students excluded from any NAEP sample should not exceed 5 percent. Samples falling below this goal shall be prominently designated in reports as not attaining the desired inclusion rate of 95 percent.
4. Among students classified as either ELL or SD a goal of 85 percent inclusion shall be established. National, state, and district samples falling below this goal shall be identified in NAEP reporting.
5. In assessment frameworks adopted by the Board, the constructs to be tested should be carefully defined, and allowable accommodations should be identified.
6. All items and directions in NAEP assessments should be clearly written and free of linguistic complexity irrelevant to the constructs assessed.
7. Enhanced efforts should be made to provide a short clear description of the purpose and value of NAEP and of full student participation in the assessment. These materials should be aimed at school personnel, state officials, and the general public, including the parents of students with disabilities and English language learners. The materials should emphasize that NAEP provides important information on academic progress and that all groups of students should be counted in the Nation's Report Card. The materials should state clearly that NAEP gives no results for individual students or schools, and can have no impact on student status, grades, or placement decisions.
8. Before each state and district-level assessment NAEP program representatives should meet with testing directors and officials concerned with SD and ELL students to explain NAEP inclusion rules. The concerns of state and local decision makers should be discussed.

IMPLEMENTATION GUIDELINES

For Students with Disabilities

1. Students with disabilities should participate in the National Assessment with or without allowable accommodations, as needed. Allowable accommodations are any changes from standard test administration procedures, needed to provide fair access by students with disabilities that do not alter the constructs being measured and produce valid results. In cases where non-standard procedures are permitted on state tests but not allowed on NAEP, students will be urged to take NAEP without them, but these students may use other allowable accommodations that they need.
2. The decision tree for participation of students with disabilities in NAEP shall be as follows:

NAEP Decision Tree for Students with Disabilities

BACKGROUND CONTEXT

1. NAEP is designed to measure constructs carefully defined in assessment frameworks adopted by the National Assessment Governing Board.
2. NAEP provides a list of appropriate accommodations and non-allowed modifications in each subject. An appropriate accommodation changes the way NAEP is normally administered to enable a student to take the test but does not alter the construct being measured. An inappropriate modification changes the way NAEP is normally administered but does alter the construct being measured.

STEPS OF THE DECISION TREE

3. In deciding how a student will participate in NAEP:
 - a. If the student has an Individualized Education Program (IEP) or Section 504 plan and is tested without accommodation, then he or she takes NAEP without accommodation.
 - b. If the student's IEP or 504 plan specifies an accommodation permitted by NAEP, then the student takes NAEP with that accommodation.
 - c. If the student's IEP or 504 plan specifies an accommodation or modification that is not allowed on NAEP, then the student is encouraged to take NAEP without that accommodation or modification.

3. Students should be considered for exclusion from NAEP only if they have previously been identified in an Individualized Education Program (IEP) as having the most significant cognitive disabilities, and are assessed by the state on an alternate assessment based on alternate achievement standards (AA-AAS). All students tested by the state on an alternate assessment with modified achievement standards (AA-MAS) should be included in the National Assessment.
4. The number of students who do not refusing to take the assessment because a particular accommodation is not allowed should not be classified as exclusions but placed in the category of refusals under NAEP data analysis procedures be tracked and minimized to the extent possible.
5. NAEP should report separately on students with Individualized Education Programs (IEPs) and those with Section 504 plans, but (except to maintain trend) should only count the students with IEPs as students with disabilities. All 504 students should participate in NAEP.

At present the National Assessment reports on students with disabilities by combining results for those with an individualized education program (who receive special education services under the Individuals with Disabilities Education Act [IDEA]) and students with Section 504 plans under the Rehabilitation Act of 1973 (a much smaller group with disabilities who are not receiving services under IDEA but may be allowed test accommodations).^{*} Under the Elementary and Secondary Education Act, only those with an IEP are counted as students with disabilities in reporting state test results. NAEP should be consistent with this practice. However, to preserve trend, results for both categories should be combined for several more assessment years, but over time NAEP should report as students with disabilities only those who have an IEP.

6. Only students with an IEP or Section 504 plan are eligible for accommodations on NAEP. States are urged to adopt policies providing that such documents should address participation in the National Assessment.

For English Language Learners

1. All English language learners selected for the NAEP sample who have been in United States schools for one year or more should be included in the National Assessment. Those in U.S. schools for less than one year should take the assessment if it is available in the student's primary language.

^{*} NOTE: The regulation implementing Section 504 defines a person with a disability as one who has a physical or mental impairment which substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment. 34 C.F.R. § 104.3(j)(1).

One year or more shall be defined as one full academic year before the year of the assessment.

2. Accommodations should be offered that maximize meaningful participation, are responsive to the student's level of English proficiency, and maintain the constructs in the NAEP framework. A list of allowable accommodations should be prepared by NAEP and furnished to participating schools. Such accommodations may be provided only to students who are not native speakers of English and are currently classified by their schools as English language learners or limited English proficient (LEP).
3. Bilingual versions of NAEP in Spanish and English should be prepared in all subjects, other than reading and writing, to the extent deemed feasible by the National Center for Education Statistics. The assessments of reading and writing should continue to be in English only, as provided for in the NAEP frameworks for these subjects.
4. Staff at each school should select from among appropriate ELL-responsive accommodations allowed by NAEP, including bilingual booklets, those that best meet the linguistic needs of each student. Decisions should be made by a qualified professional familiar with the student, using objective indicators of English proficiency (such as the English language proficiency assessments [ELPA] required by federal law), in accordance with guidance provided by NAEP and subject to review by the NAEP assessment coordinator.
5. Schools may provide word-to-word bilingual dictionaries (without definitions) between English and the student's primary language, except for NAEP reading and writing, which are assessments in English only.
6. NAEP results for ELL students should be disaggregated and reported by detailed information on students' level of English language proficiency, using the best available standardized assessment data. As soon as possible, NAEP should develop its own brief test of English language proficiency to bring consistency to reporting nationwide.
7. Data should be collected, disaggregated, and reported for former English language learners who have been reclassified as English proficient and exited from the ELL category. This should include data on the number of years since students exited ELL services or were reclassified.
8. English language learners who are also classified as students with disabilities should first be given linguistically-appropriate accommodations before determining which additional accommodations may be needed to address any disabilities they may have.

RESEARCH AND DEVELOPMENT

The Governing Board supports an aggressive schedule of research and development in the following areas:

1. The use of plain language and the principles of universal design, including a plain language review of new test items consistent with adopted frameworks.
2. Adaptive testing, either computer-based or paper-and-pencil. Such testing should provide more precise and accurate information than is available at present on low-performing and high-performing groups of students, and may include items appropriate for ELLs at low or intermediate levels of English proficiency. Data produced by such targeted testing should be placed on the common NAEP scale. Students assessed under any new procedures should be able to demonstrate fully their knowledge and skills on a range of material specified in NAEP frameworks.
3. A brief, easily-administered test of English language proficiency to be used for determining whether students should receive a translation, adaptive testing, or other accommodations because of limited English proficiency.
4. The validity and impact of commonly used testing accommodations, such as extended time and small group administration.
5. The identification, measurement, and reporting on academic achievement of students with the most significant cognitive disabilities. This should be done in order to make recommendations on how such students could be included in NAEP in the future.
6. A study of outlier states and districts with notably high or low exclusion rates for either SD or ELL students to identify the characteristics of state policies, the approach of decision makers, and other criteria associated with different inclusion levels.

The Governing Board requests NCES to prepare a research agenda on the topics above. A status report on this research should be presented at the November 2010 meeting of the Board.

Excerpt from the 2015 NAEP Questionnaire about Students with Disabilities

What accommodations does **STUDENT** receive on the state test for **Reading**?

If a student is not assessed on the state test in **Reading**, base the response on how the student is assessed in the classroom in **Reading**.

NOTE: For a description of how each accommodation is conducted in NAEP, place your cursor over the name of each accommodation. Choose all that apply.

- ☐ Student does not receive any accommodations
- ☐ Extended time
- ☐ Small group
- ☐ One on one
- ☐ Read aloud in English – directions only
- ☐ Read aloud in English – occasional
- ☐ Read aloud in English – most or all
- ☐ Breaks during testing
- ☐ Must have an aide administer the test
- ☐ Large print version of the test
- ☐ Magnification
- ☐ Uses template/special equipment/preferential seating
- ☐ Presentation in Braille
- ☐ Response in Braille
- ☐ Presentation in sign language
- ☐ Response in sign language
- ☐ Other (specify)

In 2015, the information that is captured will allow us to distinguish between accommodations allowed on the NAEP Reading Assessment (e.g., Read aloud in English – directions only) and accommodations not allowed on the NAEP Reading Assessment (e.g., Read aloud in English – occasional, Read aloud in English – most or all).

In 2013, a single item asked whether students received any Read aloud accommodation (directions only/occasional/most or all); therefore, it was not possible to distinguish between accommodations allowed by NAEP and accommodations not allowed by NAEP.

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP reading for fourth- and eighth-grade public and nonpublic school students, as a percentage of all students, by state/jurisdiction: 2013

State/jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
Nation	97¹	97.3	97.6	98¹	97.7	98.0
Nation (public)	97 ¹	97.2	97.5	98 ¹	97.5	97.9
Alabama	99 ¹	98.3	99.3	99 ¹	98.2	99.3
Alaska	99 ¹	97.9	99.0	99 ¹	98.1	99.0
Arizona	99 ¹	98.3	99.3	99 ¹	98.0	98.9
Arkansas	99 ¹	98.4	99.2	98 ¹	97.3	98.6
California	97 ¹	96.7	98.1	97 ¹	96.7	98.1
Colorado	98 ¹	97.9	98.9	99 ¹	98.4	99.2
Connecticut	98 ¹	97.8	98.9	98 ¹	97.2	98.4
Delaware	95 ¹	94.3	96.1	97 ¹	95.8	97.1
Florida	97 ¹	96.1	97.8	98 ¹	97.4	98.7
Georgia	95 ¹	93.7	96.2	96 ¹	95.2	97.0
Hawaii	98 ¹	97.6	98.6	98 ¹	97.4	98.5
Idaho	99 ¹	98.0	98.9	98 ¹	97.8	98.8
Illinois	99 ¹	98.3	99.1	99 ¹	98.1	98.9
Indiana	98 ¹	96.4	98.3	98 ¹	97.4	98.6
Iowa	99 ¹	98.4	99.2	99 ¹	98.1	99.2
Kansas	98 ¹	97.5	98.7	98 ¹	97.7	98.7
Kentucky	97 ¹	96.4	97.5	97 ¹	95.9	97.4
Louisiana	99 ¹	98.4	99.2	99 ¹	98.3	99.1
Maine	98 ¹	97.7	98.7	98 ¹	97.9	98.9
Maryland	87	85.9	88.3	91	89.4	91.7
Massachusetts	97 ¹	96.7	97.8	98 ¹	97.1	98.4
Michigan	96 ¹	95.0	97.1	96 ¹	95.1	97.5
Minnesota	97 ¹	96.5	97.9	98 ¹	97.0	98.2
Mississippi	99 ¹	99.0	99.7	99 ¹	98.9	99.5
Missouri	99 ¹	98.2	99.2	99 ¹	98.5	99.3
Montana	97 ¹	96.5	97.6	98 ¹	97.0	98.3
Nebraska	96 ¹	95.4	97.2	97 ¹	96.2	97.7
Nevada	98 ¹	98.0	98.9	99 ¹	98.6	99.3
New Hampshire	97 ¹	96.7	98.0	97 ¹	96.5	97.6
New Jersey	98 ¹	97.4	98.9	97 ¹	96.4	98.1
New Mexico	99 ¹	98.6	99.3	98 ¹	97.8	98.7
New York	99 ¹	97.9	99.1	99 ¹	98.6	99.4
North Carolina	98 ¹	97.4	98.7	98 ¹	97.6	98.8
North Dakota	96 ¹	95.3	96.5	96 ¹	94.9	96.4
Ohio	97 ¹	96.3	98.2	98 ¹	96.8	98.4
Oklahoma	98 ¹	97.5	98.8	99 ¹	98.0	99.0
Oregon	98 ¹	96.8	98.1	99 ¹	98.0	99.0
Pennsylvania	98 ¹	96.9	98.3	98 ¹	97.6	98.7
Rhode Island	99 ¹	98.2	99.0	99 ¹	98.2	99.0
South Carolina	98 ¹	97.3	98.9	98 ¹	97.5	98.6

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP reading for fourth- and eighth-grade public and nonpublic school students, as a percentage of all students, by state/jurisdiction: 2013

State/jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
Nation	97¹	97.3	97.6	98¹	97.7	98.0
Nation (public)	97 ¹	97.2	97.5	98 ¹	97.5	97.9
South Dakota	98 ¹	97.1	98.3	97 ¹	96.1	97.7
Tennessee	97 ¹	96.0	97.6	97 ¹	96.0	97.5
Texas	95 ¹	94.0	96.0	96 ¹	95.6	97.2
Utah	97 ¹	96.1	97.6	97 ¹	96.0	97.7
Vermont	99 ¹	98.3	99.2	99 ¹	98.6	99.4
Virginia	98 ¹	97.9	98.9	99 ¹	98.1	99.0
Washington	97 ¹	96.2	97.9	98 ¹	96.8	98.1
West Virginia	98 ¹	97.6	98.7	98 ¹	97.6	98.6
Wisconsin	98 ¹	97.8	98.8	98 ¹	97.8	98.8
Wyoming	99 ¹	98.3	99.1	99 ¹	98.5	99.1
Other jurisdictions						
District of Columbia	98 ¹	97.6	98.9	98 ¹	97.6	98.6
DoDEA ²	94	93.2	94.8	96 ¹	95.3	96.9

¹ The state/jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 95 percent.

² Department of Defense Education Activity (overseas and domestic schools).

NOTE: The overall national results include both public and nonpublic school students. The national (public) and state/jurisdiction results include public school students only. Data for DoDEA schools are included in the overall national results, but not in the national (public) results.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2013 Reading Assessment.

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP reading for fourth- and eighth-grade public school students, as a percentage of all students, by jurisdiction: 2013

Jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
Nation (public)	97 ²	97.2	97.5	98 ²	97.5	97.9
Large city¹	97 ²	96.1	97.1	98 ²	97.2	97.9
Albuquerque	99 ²	98.8	99.5	98 ²	97.1	98.6
Atlanta	99 ²	98.5	99.1	99 ²	98.4	99.3
Austin	96 ²	94.1	97.4	97 ²	95.6	97.4
Baltimore City	84	81.8	86.3	84	81.1	85.8
Boston	96 ²	94.9	96.3	97 ²	95.8	97.3
Charlotte	99 ²	98.4	99.5	98 ²	97.6	98.8
Chicago	99 ²	97.6	99.1	98 ²	97.5	99.0
Cleveland	95 ²	94.5	96.0	96 ²	95.5	97.3
Dallas	83	75.3	88.5	96 ²	95.4	97.3
Detroit	95 ²	92.7	96.0	94 ²	92.6	95.7
District of Columbia (DCPS)	98 ²	96.7	98.5	97 ²	96.4	98.3
Fresno	98 ²	96.7	98.3	97 ²	96.0	97.6
Hillsborough County (FL)	99 ²	98.3	99.3	98 ²	97.2	98.7
Houston	94 ²	91.0	95.5	96 ²	95.3	97.0
Jefferson County (KY)	95 ²	92.5	96.3	96 ²	94.4	96.7
Los Angeles	98 ²	96.6	98.7	97 ²	96.4	98.0
Miami-Dade	95 ²	92.3	97.4	97 ²	95.2	98.3
Milwaukee	96 ²	93.8	97.3	96 ²	94.4	97.1
New York City	98 ²	97.4	99.0	99 ²	97.8	99.0
Philadelphia	96 ²	94.9	97.1	96 ²	93.0	98.0
San Diego	98 ²	96.6	98.4	97 ²	96.2	98.3

¹ Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.

² The jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 95 percent.

NOTE: DCPS = District of Columbia Public Schools.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2013 Reading Assessment.

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP mathematics for fourth- and eighth-grade public and nonpublic school students, as a percentage of all students, by state/jurisdiction: 2013

State/jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
Nation	99¹	98.5	98.7	99¹	98.4	98.6
Nation (public)	98 ¹	98.4	98.6	98 ¹	98.3	98.5
Alabama	99 ¹	98.1	99.4	99 ¹	98.6	99.2
Alaska	99 ¹	98.4	99.2	99 ¹	98.5	99.2
Arizona	99 ¹	98.3	99.1	99 ¹	98.2	99.1
Arkansas	99 ¹	98.3	99.1	98 ¹	97.5	98.5
California	98 ¹	97.4	98.6	99 ¹	98.0	98.9
Colorado	99 ¹	98.3	99.2	99 ¹	98.3	99.3
Connecticut	99 ¹	98.1	99.1	98 ¹	97.4	98.4
Delaware	98 ¹	97.1	98.5	99 ¹	98.2	99.0
Florida	98 ¹	97.5	98.6	98 ¹	97.7	98.8
Georgia	99 ¹	97.9	99.0	98 ¹	97.7	99.0
Hawaii	99 ¹	98.3	99.1	98 ¹	97.8	98.8
Idaho	99 ¹	98.3	99.0	99 ¹	98.5	99.3
Illinois	99 ¹	98.4	99.4	99 ¹	98.6	99.3
Indiana	98 ¹	97.9	98.9	98 ¹	97.7	98.8
Iowa	99 ¹	98.8	99.6	99 ¹	98.8	99.5
Kansas	98 ¹	97.9	98.8	98 ¹	97.7	98.8
Kentucky	99 ¹	98.0	99.0	98 ¹	97.2	98.5
Louisiana	99 ¹	98.3	99.3	99 ¹	98.5	99.2
Maine	98 ¹	97.3	98.4	99 ¹	98.2	99.0
Maryland	99 ¹	98.6	99.3	98 ¹	97.7	98.7
Massachusetts	98 ¹	97.3	98.5	98 ¹	97.1	98.6
Michigan	98 ¹	97.3	98.6	98 ¹	95.8	98.6
Minnesota	99 ¹	98.1	99.0	98 ¹	97.6	98.8
Mississippi	99 ¹	98.7	99.5	99 ¹	98.5	99.6
Missouri	99 ¹	98.0	99.0	99 ¹	98.2	99.1
Montana	98 ¹	97.8	98.7	99 ¹	98.0	99.0
Nebraska	98 ¹	97.6	98.8	98 ¹	97.6	98.6
Nevada	99 ¹	98.1	99.0	99 ¹	98.4	99.3
New Hampshire	99 ¹	98.3	99.1	99 ¹	98.5	99.3
New Jersey	99 ¹	98.3	99.2	98 ¹	97.7	98.8
New Mexico	99 ¹	98.2	99.2	98 ¹	97.9	98.8
New York	99 ¹	98.1	99.2	98 ¹	97.1	98.7
North Carolina	99 ¹	98.3	99.1	99 ¹	98.2	99.1
North Dakota	97 ¹	96.8	97.9	97 ¹	96.5	97.5
Ohio	99 ¹	98.2	99.0	98 ¹	98.0	98.9
Oklahoma	98 ¹	97.5	98.6	98 ¹	97.7	98.9
Oregon	98 ¹	97.2	98.4	99 ¹	97.9	99.0
Pennsylvania	98 ¹	97.8	98.8	98 ¹	97.4	98.9
Rhode Island	99 ¹	98.4	99.2	99 ¹	98.5	99.2
South Carolina	99 ¹	98.2	99.3	99 ¹	98.0	99.1

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP mathematics for fourth- and eighth-grade public and nonpublic school students, as a percentage of all students, by state/jurisdiction: 2013

State/jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
South Dakota	99 ¹	98.0	99.0	99 ¹	98.2	99.1
Tennessee	99 ¹	98.0	99.1	98 ¹	97.7	98.7
Texas	98 ¹	97.9	98.7	98 ¹	97.4	98.6
Utah	99 ¹	98.1	99.2	98 ¹	97.9	98.9
Vermont	99 ¹	98.2	99.0	99 ¹	98.8	99.4
Virginia	98 ¹	98.0	98.9	99 ¹	98.6	99.2
Washington	98 ¹	97.0	98.4	98 ¹	97.3	98.5
West Virginia	98 ¹	97.6	98.8	98 ¹	97.8	98.7
Wisconsin	98 ¹	97.7	98.6	98 ¹	97.9	98.9
Wyoming	99 ¹	98.6	99.3	98 ¹	98.0	98.9
Other jurisdictions						
District of Columbia	99 ¹	98.1	99.0	99 ¹	98.5	99.4
DoDEA ²	98 ¹	97.9	98.7	99 ¹	98.4	99.2

¹ The state/jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 95 percent.

² Department of Defense Education Activity (overseas and domestic schools).

NOTE: The overall national results include both public and nonpublic school students. The national (public) and state/jurisdiction results include public school students only. Data for DoDEA schools are included in the overall national results, but not in the national (public) results.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2013 Mathematics Assessment.

National Center for Education Statistics

Inclusion rate and confidence interval in NAEP mathematics for fourth- and eighth-grade public school students, as a percentage of all students, by jurisdiction: 2013

Jurisdiction	Grade 4			Grade 8		
	Inclusion rate	95% confidence interval		Inclusion rate	95% confidence interval	
		Lower	Upper		Lower	Upper
Nation (public)	98 ²	98.4	98.6	98 ²	98.3	98.5
Large city¹	98 ²	98.0	98.4	98 ²	97.9	98.4
Albuquerque	99 ²	98.1	99.3	98 ²	97.8	99.0
Atlanta	99 ²	98.4	99.4	99 ²	98.8	99.6
Austin	98 ²	97.0	98.6	98 ²	97.4	98.6
Baltimore City	98 ²	96.9	99.2	98 ²	96.6	99.1
Boston	96 ²	95.4	97.0	97 ²	96.7	98.0
Charlotte	99 ²	97.6	99.4	99 ²	97.8	99.2
Chicago	99 ²	98.3	99.3	99 ²	98.0	99.2
Cleveland	96 ²	94.8	96.5	97 ²	96.6	98.0
Dallas	98 ²	96.8	98.3	98 ²	96.7	98.2
Detroit	95 ²	93.3	96.1	96 ²	94.4	96.9
District of Columbia (DCPS)	98 ²	97.1	98.6	98 ²	97.4	98.9
Fresno	99 ²	98.5	99.5	98 ²	97.5	98.8
Hillsborough County (FL)	99 ²	98.1	99.3	99 ²	97.8	99.2
Houston	98 ²	97.1	98.8	98 ²	97.1	98.3
Jefferson County (KY)	98 ²	97.4	98.8	98 ²	97.5	98.9
Los Angeles	98 ²	97.0	98.7	98 ²	97.8	98.9
Miami-Dade	98 ²	96.5	98.4	98 ²	97.0	98.3
Milwaukee	97 ²	95.2	97.6	96 ²	93.6	97.4
New York City	99 ²	98.0	99.1	98 ²	97.4	98.8
Philadelphia	97 ²	95.1	97.6	96 ²	92.6	98.2
San Diego	99 ²	97.7	99.1	98 ²	96.8	98.3

¹ Large city includes students from all cities in the nation with populations of 250,000 or more including the participating districts.

² The jurisdiction's inclusion rate is higher than or not significantly different from the National Assessment Governing Board goal of 95 percent.

NOTE: DCPS = District of Columbia Public Schools.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2013 Mathematics Assessment.

National Assessment Governing Board

Committee on Standards, Design and Methodology

May 16, 2014
EXCERPT

COSDAM Members: Chair Lou Fabrizio, Vice Chair Fielding Rolston, Lucille Davy, James Geringer, Andrew Ho, Terry Holliday, James Popham, and Leticia Van de Putte.

Governing Board Staff: Michelle Blair and Sharyn Rosenberg.

Other Attendees: John Easton, Director of the Institute of Education Sciences and ex officio member of the Governing Board. NCES: Peggy Carr, Arnold Goldstein, Dana Kelly, Daniel McGrath, and Grady Wilburn. AIR: Fran Stancavage. CRP: Carolyn Rudd. ETS: Rochelle Michel and Andreas Oranje. HumRRO: Lauress Wise. Optimal Solutions Group: Lipika Ahuja. Pearson: Brad Thayer. Westat: Keith Rust.

NAEP Testing and Reporting on Students with Disabilities

Mr. Fabrizio noted that the session would focus on a particular challenge associated with the March 2010 Board policy on NAEP Testing and Reporting on Students with Disabilities (SDs) and English Language Learners (ELLs). The policy was intended to reduce exclusion rates and provide more consistency across jurisdictions in which students are tested on NAEP to promote sound reporting of comparisons and trends. The policy limits the grounds upon which schools can exclude students to two categories—for SDs, only those with the most significant cognitive disabilities, and for ELLs, only those who have been in U.S. schools for less than one year. Although schools cannot limit student participation on any other grounds, individual participation in NAEP is voluntary by law and parents may withdraw their children for any reason.

The policy states, “Students refusing to take the assessment because a particular accommodation is not allowed should not be classified as exclusions but placed in the category of refusals under NAEP data analysis procedures.” Under NAEP data analysis procedures, a weight class adjustment is used to account for students who refuse to take the assessment, but excluded students have no impact on estimated scores. Contrary to the Board policy, NCES has continued to permit schools to exclude students whose Individualized Education Programs (IEPs) call for accommodations that NAEP does not allow. NCES asserts that it is technically incorrect to apply a weight class adjustment that combines students who did not participate due to receiving accommodations on their state tests that are not allowed on NAEP with students who refused for other reasons.

Grady Wilburn of the National Center for Education Statistics (NCES) and Rochelle Michel from Educational Testing Service (ETS) presented three alternative methods for adjusting scores for students who were excluded from NAEP, contrary to the Board policy. The first method, “*Expanded*” *population estimates*, would improve upon the methodology of the full population

estimates (FPEs) and incorporate additional data from NAEP teacher and school contextual questionnaires and from school records (e.g., state test scores for individual students). The second method, *Modified participation A*, would involve administering only the contextual questionnaire to excluded students and using that additional information to predict how the students would have performed on the cognitive items. The third method, *Modified participation B*, would involve administering the contextual questionnaire in the selected subject (i.e., Reading) in conjunction with an assessment in a different subject (e.g., Mathematics) and using both sources of information to predict how the students would have done on the Reading assessment.

COSDAM members expressed serious reservations about implementing any of the three procedures due to the following reasons: current concerns about collecting student data; the potential for jeopardizing trend reporting; increased costs; and the threat of depressing scores due to a change in the population of tested students. There was general consensus that NCES' current practices on this particular aspect of the policy—encouraging schools to include more students in NAEP even when they receive accommodations on their state tests that are not allowed on NAEP, but still allowing schools to exclude such students if they insist—was acceptable.

The committee asked whether it is possible to identify students who *do* take the NAEP Reading assessment despite receiving a read-aloud accommodation on their state tests. Peggy Carr, Associate Commissioner of NCES, noted that the SD questionnaire will be modified for 2015 to capture this information.

Andrew Ho suggested the following edit to the policy: “Students refusing to take the assessment because a particular accommodation is not allowed should not be classified as exclusions but ~~placed in the category of refusals under NAEP data analysis procedures~~ be tracked and minimized to the extent possible.” The committee agreed with Mr. Ho’s suggestion.

Mr. Fabrizio asked that this recommendation be shared with the Reporting and Dissemination Committee in joint session during the August 2014 meeting.

National Assessment Governing Board Committee on Standards, Design and Methodology

December 6, 2013

EXCERPT

JOINT MEETING WITH REPORTING AND DISSEMINATION COMMITTEE

Attendees

COSDAM Members: Chair Lou Fabrizio, Vice Chair Fielding Rolston, Lucille Davy, Andrew Ho, Terry Holliday, and James Popham.

Reporting and Dissemination Committee Members: Acting Chair Terry Mazany (Vice Chair of the Reporting and Dissemination Committee), Anitere Flores, Rebecca Gagnon, Tom Luna, Tonya Miles, and Father Joseph O’Keefe.

Governing Board Staff: Executive Director Cornelia Orr, Michelle Blair, Larry Feinberg, Stephaan Harris, and Sharyn Rosenberg.

Other Attendees: John Easton, Director of the Institute of Education Sciences and ex officio member of the Governing Board. NCES: Commissioner Jack Buckley, Gina Broxterman, Patricia Etienne, Arnold Goldstein, Andrew Kolstad, and Daniel McGrath. AIR: Victor Bandeira de Mello, George Bohrnstedt, Markus Broer, and Cadelle Hemphill. ETS: Andreas Oranje, John Mazzeo, and Lisa Ward. Hager Sharp: David Hoff, Debra Silimeo, and Melissa Spade Cristler. HumRRO: Steve Sellman and Laurie Wise. Optimal Solutions Group: Rukayat Akinbiyi. Reingold: Amy Buckley, Erin Fenn, Sarah Johnson, and Valeri Marrapodi. Virginia Department of Education: Pat Wright. Westat: Chris Averett and Keith Rust. Widmeyer: Jason Smith.

Lou Fabrizio, Chair of the Committee on Standards, Design and Methodology (COSDAM), called the meeting to order at 10:02 a.m. and welcomed members and guests. The purpose of the joint session was to discuss implementation in the NAEP 2013 assessments of the Governing Board policy on NAEP Testing and Reporting on Students with Disabilities (SD) and English Language Learners (ELL).

Larry Feinberg, of the Governing Board staff, described the March 2010 policy, which was intended to reduce exclusion rates and provide consistency across jurisdictions in how students are tested to promote sound reporting of comparisons and trends. The policy limits the grounds on which schools can exclude students from NAEP samples to two categories—for SD, only those with the most significant cognitive disabilities, and for ELL, only those who have been in U.S. schools for less than a year.

He noted that previously, schools could exclude students with Individualized Education Programs (IEPs) that called for accommodations on state tests that NAEP does not allow because they would alter the construct NAEP assesses. The most widely used of these were

having the test read aloud for the Reading assessment and using a calculator for all parts of the Mathematics assessment.

Under the current Board policy, schools can no longer decide to exclude students whose IEPs for state tests specify an accommodation not allowed on NAEP. Instead, such students should take NAEP with allowable accommodations. Parents should be encouraged to permit them to do so, given that NAEP provides no scores and causes no consequences for individuals but needs fully representative samples to produce the valid results for the groups on which it reports. By law, individual participation in NAEP is voluntary and parents may withdraw their children for any reason.

When parents refuse to allow children to participate in NAEP, scores are imputed based on reweighting the performance of other students with similar characteristics. However, when students are excluded, they do not impact group scores at all, and, in effect, are considered to achieve at the group average.

Grady Wilburn, of NCES, presented 2013 participation data for grades 4 and 8 Reading and Mathematics. He noted large increases in inclusion rates over the past ten years, and said the Board's inclusion goals—95 percent of all students in each sample and 85 percent of students identified as SD or ELL—had been met in almost all states. According to calculations by Keith Rust, of Westat, converting exclusions in reading to refusals would produce a statistically significant change in only one state, Maryland. However, Peggy Carr, Associate Commissioner of Assessment at NCES, said the impact would be much greater in some of the urban districts in TUDA, whose 2013 results have not yet been released.

In accordance with Board action, Mr. Wilburn said NCES had also published scores based on full-population estimates, (FPEs), which adjust state and district averages by imputing scores for excluded SD and ELL students based on the performance of similar SD and ELL students who are tested. Member Andrew Ho said these estimates should be given more emphasis as a way to give consistency to trends and make it clear when score changes are likely to have been caused by changes in exclusion rates. Ms. Carr said improvements were possible in the models for imputing FPEs.

Mr. Wilburn explained that, contrary to the Board policy, NCES had continued to permit schools to exclude students whose IEPs called for accommodations that NAEP does not allow, in most cases, read-aloud. NCES believes changing this practice would increase refusals, impact reported trends, change NAEP's target population, and violate sound psychometric procedures.

For mathematics in 2013, NCES introduced a new option for students whose IEPs call for a calculator accommodation, where schools could choose to have these students take two calculator-active NAEP blocks, even if those were not the blocks that would have been randomly assigned through the matrix sampling design. Mr. Feinberg said this change, by reducing exclusions, had also impacted some reported trends.

Jack Buckley, the Commissioner of Education Statistics, noted that it is not clear who gets to define NAEP's target population. He said NCES and the Board disagree about whether it should include students whose IEPs specify accommodations that NAEP does not allow.

Mr. Wilburn said NCES plans to publish a technical memo that will focus on how refusal and exclusion issues impact NAEP participation and performance. The memo will include total participation rates that summarize non-participation from all causes—exclusions, refusals, and absence (which is the largest category). The memo will also provide data on the proportion of exclusions based on NAEP not allowing a state-provided accommodation.

There was additional discussion on the impact that exclusion and refusal changes would have on TUDA districts. Terry Mazany, the acting chair of the Reporting and Dissemination Committee, conveyed a message from Andrés Alonso, the Committee chair who was not present. He said Mr. Alonso, former superintendent of Baltimore schools, had urged that policy changes impacting NAEP exclusions and scores should be highlighted in NAEP reports to provide context for interpreting results and that historical data should be provided.

The Committees asked the staffs of NCES and NAGB to consider possible policy changes and what their impact might be. Lou Fabrizio, chair of the Committee on Standards, Design and Methodology, asked staff to prepare recommendations for moving forward and a timeline for possible Board action.

Technology and Engineering Literacy Achievement Levels Descriptions

Basic: Eighth grade students performing at the *Basic* level should be able to use common tools and media to achieve specified goals and identify major impacts. They should demonstrate an understanding that humans can develop solutions by creating and using technologies. They should be able to identify major positive and negative effects that technology can have on the natural and designed world. Students should be able to use systematic engineering design processes to solve a simple problem that responsibly addresses a human need or want. Students should distinguish components in selected technological systems and recognize that technologies require maintenance. They should select common information and communications technology tools and media for specified purposes, tasks, and audiences. Students should be able to find and evaluate sources, organize and display data and other information to address simple research tasks, give appropriate acknowledgement for use of the work of others, and use feedback from team members (assessed virtually).

Proficient: Eighth grade students performing at the *Proficient* level should be able to understand the interactions among parts within systems, systematically develop solutions, and contribute to teams (assessed virtually) using common and specialized tools to achieve goals. They should be able to explain how technology and society influence each other by comparing the benefits and limitations of the technologies' impacts. Students should be able to analyze the interactions among components in technological systems and consider how the behavior of a single part affects the whole. They should be able to diagnose the cause of a simple technological problem. They should be able to use a variety of technologies and work with others using systematic engineering design processes in which they iteratively plan, analyze, generate, and communicate solutions. Students should be able to select and use an appropriate range of tools and media for a variety of purposes, tasks, and audiences. They should be able to contribute to work of team collaborators (assessed virtually) and provide constructive feedback. Students should be able to find, evaluate, organize, and display data and information to answer research questions, solve problems, and achieve goals, appropriately citing use of the ideas, words, and images of others.

Advanced: Eighth grade students performing at the *Advanced* level should be able to draw upon multiple tools and media to address complex problems and goals and demonstrate their understanding of the potential impacts on society. They should be able to explain the complex relationships between technologies and society and the potential implications of technological decisions on society and the natural world. Given criteria and constraints, students should be able to use systematic engineering design processes to plan, design, and use evidence to evaluate and refine multiple possible solutions to a need or problem and justify their solutions. Students should be able to explain the relationships among components in technological systems, anticipate maintenance issues, identify root causes, and repair faults. They should be able to use a variety of common and specialized information technologies to achieve goals, and to produce and communicate solutions to complex problems. Students should be able to integrate the use of multiple tools and media, evaluate and use data and information, communicate with a range of audiences, and accomplish complex tasks. They should be able to use and explain the ethical and appropriate methods for citing use of multimedia sources and the ideas and work of others. Students should be able to contribute to collaborative tasks on a team (assessed virtually) and organize, monitor, and refine team processes.

Technology and Engineering Literacy (TEL) Achievement Levels Setting

A Request for Proposals (RFP) was issued on March 24, 2014 to set achievement levels for the 2014 grade 8 NAEP Technology and Engineering Literacy (TEL) Assessment. On July 2, 2014, a 15-month contract in the amount of \$1.1 million was awarded to NCS Pearson (Pearson); the press release is available at <http://www.nagb.org/newsroom/press-releases/2014/release-20140702.html>. Pearson has subcontracted with edCount, LLC, a woman-owned small business that focuses on standards, assessment, and accountability, and Conference Solutions, LLC, a woman-owned small business with expertise in planning meetings.

In this session, Pearson will provide an introduction and overview of the TEL ALS contract, including key staff and project milestones.

NAEP 12th Grade Academic Preparedness Research

Phase 1 Research

The first phase of the Governing Board's research on academic preparedness is now complete; results from more than 30 studies are available at: <http://www.nagb.org/what-we-do/preparedness-research.html>. During the August 2013 meeting, the Board voted on a motion to use the phase 1 research on academic preparedness for college in the reporting of the 2013 grade 12 national results for reading and mathematics, released on May 14, 2014. The motion, validity argument, and phase 1 final report are now available on the aforementioned website.

Phase 2 Research

The second phase of the Governing Board's research on academic preparedness currently consists of the following studies that are planned or underway:

Study name	Sample	August 2014 Update
Statistical linking of NAEP and ACT	National; FL, IL, MA, MI, TN	Page 27
Longitudinal statistical relationships: Grade 12 NAEP	FL, IL, MA, MI, TN	Page 28
Statistical linking of NAEP and EXPLORE	KY, NC, TN	Page 29
Longitudinal statistical relationships: Grade 8 NAEP	KY, NC, TN	Page 30
Content alignment of NAEP and EXPLORE		Page 31
College Course Content Analysis		Page 33
Evaluating Reading and Mathematics Frameworks and Item Pools as Measures of Academic Preparedness for College and Job Training (Research with Frameworks)		Pages 34-36

Brief overviews and informational updates are provided for each study.

National and State Statistical Linking Studies with the ACT

The Governing Board is planning to partner with ACT, Inc. to conduct a statistical linking study at the national level between NAEP and the ACT in Reading and Mathematics. Through a procedure that protects student confidentiality, the ACT records of 12th grade NAEP test takers in 2013 will be matched, and through this match, the linking will be performed. A similar study at the national level was performed with the SAT in 2009. There will not be a national statistical linking study performed for NAEP and the SAT in 2013.

In addition, the state-level studies, begun in 2009 with Florida, will be expanded with 2013 NAEP. Again using a procedure that protects student confidentiality, ACT scores of NAEP 12th grade test takers in the state samples in partner states will be linked to NAEP scores. We are in the planning stages with five states to be partners in these studies at grade 12: Florida, Illinois, Massachusetts, Michigan, and Tennessee. In three of these states (IL, MI, TN), the ACT is administered to all students state-wide, regardless of students' intentions for postsecondary activities.

Draft Research Questions for National and State Statistical Linking Studies with the ACT:

1. What are the correlations between the grade 12 NAEP and ACT student score distributions in Reading and Math?
2. What scores on the grade 12 NAEP Reading and Math scales correspond to the ACT college readiness benchmarks? (concordance and/or projection)
3. What are the average grade 12 NAEP Reading and Math scores and interquartile ranges (IQR) for students below, at, and at or above the ACT college readiness benchmarks?
4. Do the results differ by race/ethnicity or gender?

August 2014 Update: The data sharing agreements are still in the process of being finalized.

Longitudinal Statistical Relationships: Grade 12 NAEP

In addition to the linking of ACT scores to NAEP 12th grade test scores in partner states, the postsecondary activities of NAEP 12th grade test takers will be followed for up to six years using the state longitudinal databases in Florida, Illinois, Massachusetts, Michigan, and Tennessee. These studies will examine the relationship between 12th grade NAEP scores and scores on placement tests, placement into remedial versus credit-bearing courses, GPA, and persistence.

Draft Research Questions for Longitudinal Statistical Relationships, Grade 12 NAEP:

1. What is the relationship between grade 12 NAEP Reading and Math scores and grade 8 state test scores?
2. What are the average grade 12 NAEP Reading and Math scores and interquartile ranges (IQR) for students with placement in remedial and non-remedial courses?
3. What are the average grade 12 NAEP Reading and Math scores (and the IQR) for students with a first-year GPA of B- or above?
4. What are the average grade 12 NAEP Reading and Math scores (and the IQR) for students who remain in college after each year?
5. What are the average grade 12 NAEP Reading and Math scores (and the IQR) for students who graduate from college within 6 years?

August 2014 Update: The data sharing agreements are still in the process of being finalized.

State Statistical Linking Studies with EXPLORE

In 2013, linking studies between 8th grade NAEP in Reading and Mathematics and 8th grade EXPLORE, a test developed by ACT, Inc. that is linked to performance on the ACT, are planned with partners in three states: Kentucky, North Carolina, and Tennessee. In all three of these states, EXPLORE is administered to all students state-wide during grade 8.

Draft Research Questions for State Statistical Linking Studies with EXPLORE:

1. What are the correlations between the grade 8 NAEP and EXPLORE scores in Reading and Math?
2. What scores on the grade 8 NAEP Reading and Math scales correspond to the EXPLORE college readiness benchmarks (concordance and/or projection)?
3. What are the average grade 8 NAEP Reading and Math scores and the interquartile ranges (IQR) for students below, at, and at or above the EXPLORE college readiness benchmarks?

August 2014 Update: The data sharing agreements are complete; we are in the process of obtaining the data to begin the analyses.

Longitudinal Statistical Relationships: Grade 8 NAEP

In 2013, the Governing Board will also expand the state-level studies by partnering with two states at grade 8. Again using a procedure that protects student confidentiality, secondary and postsecondary data for NAEP 8th grade test takers in the state samples in partner states will be linked to NAEP scores. These studies will examine the relationship between 8th grade NAEP scores and scores on state tests, future ACT scores, placement into remedial versus credit-bearing courses, and first-year college GPA.

Two states will be partners in these studies at grade 8: North Carolina and Tennessee.

Draft Research Questions for Longitudinal Statistical Relationships, Grade 8 NAEP:

1. What is the relationship between NAEP Reading and Math scores at grade 8 and state test scores at grade 4?
2. What are the average NAEP Reading and Math scores and the interquartile ranges (IQR) at grade 8 for students below the ACT benchmarks at grade 11/12? At or above the ACT benchmarks?
3. What are the average NAEP Reading and Math scores and the interquartile ranges (IQR) at grade 8 for students who are placed in remedial and non-remedial courses in college?
4. What are the average NAEP Reading and Math scores (and the IQR) at grade 8 for students who obtain a first-year college GPA of B- or above?
5. What is the relationship between grade 8 NAEP Reading and Math scores and grade 12 NAEP Reading and Math scores? (contingent on feasibility of sampling the same students in TN and NC)

August 2014 Update: The data sharing agreements are complete; we are in the process of obtaining the data to begin the analyses.

Content Alignment Study of Grade 8 NAEP Reading and Mathematics and EXPLORE

Content alignment studies are a foundation for the trail of evidence needed for establishing the validity of preparedness reporting, and are, therefore, considered a high priority in the Governing Board's Program of Preparedness Research. The alignment studies will inform the interpretations of preparedness research findings from statistical relationship studies and help to shape the statements that can be made about preparedness. Content alignment studies were recommended to evaluate the extent to which NAEP content overlaps with that of the other assessments to be used as indicators of preparedness in the research.

We plan to conduct an alignment study of grade 8 NAEP Reading and Mathematics and ACT EXPLORE. Results from this content alignment study will be particularly important for interpreting the findings from the statistical linking studies of NAEP and EXPLORE.

August 2014 Update: ACT has agreed to having a NAEP and EXPLORE content alignment study performed by an independent third party. A Request for Proposals (RFP) was released on June 20th, and proposals are due on August 4th. We intend to award the contract by the end of September.

OVERVIEW OF REFERENCED ASSESSMENTS

For additional background information, the following list presents a brief description of the assessments referenced in the phase two academic preparedness research studies. In each case, only the mathematics and reading portions of the assessments are the targets for analysis, although analyses with the composite scores may be conducted.

- ACT – The ACT assessment is a college admissions test used by colleges and universities to determine the level of knowledge and skills in applicant pools, including Reading, English, Mathematics, and Science tests. ACT has *College Readiness Standards* that connect reading or mathematics knowledge and skills and probabilities of a college course grade of “C” or higher (0.75) or “B” or higher (0.50) with particular score ranges on the ACT assessment.
- ACT EXPLORE – ACT EXPLORE assesses academic progress of eighth and ninth grade students. It is a component of the ACT College and Career Readiness System and includes assessments of English, Mathematics, Reading, and Science. ACT EXPLORE has *College Readiness Standards* that connect reading and mathematics knowledge and skills and probabilities of a college course grade of “C” or higher (0.75) or “B” or higher (0.50) by the time students graduate high school with particular score ranges on the EXPLORE assessment.
- SAT – The SAT reasoning test is a college admissions test produced by the College Board. It is used by colleges and universities to evaluate the knowledge and skills of applicant pools in critical reading, mathematics, and writing. The SAT has calculated preparedness benchmarks are defined as the SAT scores corresponding to a 0.65 probability of earning a first-year college grade-point average of 2.67 (B-) or better.

COLLEGE COURSE CONTENT ANALYSIS

Project Status Update Contract ED-NAG-12-C-0003

The College Course Content Analysis (CCCA) study is one of a series of studies contributing to the National Assessment of Educational Progress (NAEP) Program of 12th Grade Preparedness Research conducted by the National Assessment Governing Board (NAGB). The purpose of the CCCA study is to identify a comprehensive list of the reading and mathematics knowledge, skills, and abilities (KSAs) that are pre-requisite to entry-level college mathematics courses and courses that require college level reading based on information from a representative sample of U.S. colleges. The Educational Policy Improvement Center (EPIC) is the contractor working for the Board to conduct this study.

Another goal of the CCCA study is to extend the work of the two previous preparedness studies—the Judgmental Standards Setting (JSS)¹ study, implemented in 2011 and the Job Training Program Curriculum (JTPC) study, implemented in 2012. The CCCA study is designed so the results can be compared to the JSS and JTPC studies, reporting on how this new information confirms or extends interpretations of those earlier studies. The design of the CCCA study is based on the JTPC study but with modifications based on the lessons learned.

August 2014 Update: The project is now complete (see May 2014 COSDAM materials for Executive Summary). The final report is now available on the Governing Board’s website at: http://www.nagb.org/content/nagb/assets/documents/what-we-do/preparedness-research/judgmental-standard-setting-studies/College_Course_Content_Analysis.pdf.

¹ National Assessment Governing Board. (2010). *Work Statement for Judgmental Standard Setting Workshops for the 2009 Grade 12 Reading and Mathematics National Assessment of Educational Progress to Reference Academic Preparedness for College Course Placement*. (Higher Education Solicitation number ED-R-10-0005).

EVALUATING READING AND MATHEMATICS FRAMEWORKS AND ITEM POOLS AS MEASURES OF ACADEMIC PREPAREDNESS FOR COLLEGE AND JOB TRAINING

Project Status Update July 10, 2014 Contract ED-NAG-13-C-0001

The National Assessment Governing Board contracted with the Human Resources Research Organization (HumRRO) in June 2013 to conduct three tasks related to research on 12th grade preparedness:

1. **Evaluation of the Alignment of Grade 8 and Grade 12 NAEP to an Established Measure of Job Preparedness:** In its June 2009 report, *Making New Links: 12th Grade and Beyond*, the Technical Panel on 12th Grade Preparedness Research recommended that content alignment studies be conducted to examine the structure and content of various assessments relative to NAEP. The purpose of such content alignment would be to determine whether the scores on NAEP and the other assessments convey similar meaning in terms of the knowledge and skills of examinees. In fact, the panel specifically recommended that content alignment studies be conducted between NAEP and WorkKeys to determine the correspondence between the content domain assessed by NAEP and that of WorkKeys. If the alignment is relatively high, or even moderately high in some cases, then statistical relations between NAEP and WorkKeys may allow for the interpretation of NAEP results in terms of how WorkKeys would typically be interpreted. Using WorkKeys as a measure of job training preparedness allows the comparison of findings from this research to findings from previous content alignment studies with WorkKeys. This would provide a cross-validity check with NAEP grade 12 and also expand the content alignment study by using NAEP grade 8 as well. This study will extend prior analysis of the relation of NAEP to WorkKeys by including the NAEP grade 8 assessments and by expanding the method for assessing content alignment. The study method will follow the Governing Board content alignment design document for preparedness research studies, with some modifications. The two-pronged approach includes alignment of: (a) WorkKeys to the NAEP frameworks, and (b) NAEP items to the framework from which WorkKeys was developed.
2. **O*NET Linkage Study:** This study a) identified relevant linkages between the National Assessment of Educational Progress (NAEP) and training performance requirements for selected occupations, and b) compared the levels of knowledge, skills, and abilities (KSAs) required for the relevant NAEP content to the levels of KSAs required for the relevant job training content. .

For this study, tasks (i.e., performance requirements) for each occupation were extracted from O*NET. The O*NET, or Occupational Information Network, is the U.S. Department of Labor's occupational information database. The O*NET contains standardized descriptions of 974 occupations, including the five occupations that are the focus of the National Assessment Governing Board's (Governing Board) program of research on job preparedness. Because the O*NET descriptors provide a "common language" for describing similarities and differences across occupations, it is a very useful resource for this study. Occupational

experts from each of the target occupations reviewed the O*NET task lists for their appropriateness to job training. This review was necessary because the O*NET tasks describe *job* performance requirements, but not *training* performance requirements, and the focus of the Governing Board's research is preparedness for *job training*. Based on the feedback from the occupational experts, edits were made to the O*NET task lists to ensure their applicability to job training. Next, occupational experts used these lists to identify NAEP content that is relevant ("linked") to training performance requirements. The occupational experts also identified the training performance requirements that are relevant ("linked") to NAEP content. Irrelevant content was removed from further consideration. Finally, trained project analysts used academically-relevant KSAs from O*NET to systematically rate the levels of KSAs needed for the relevant NAEP content and the levels of KSAs needed for the relevant job training content. Disconnects between the levels of KSAs needed for NAEP and the levels needed for job training were flagged for discussion.

3. **Technical Advisory Panel (TAP) Symposium:** HumRRO assembled a technical advisory panel (TAP) of five experts in educational measurement and five experts in industrial-organizational (I-O) psychology to review extant research and to generate ideas for commissioned papers on preparedness. The TAP met in Washington D.C. in late October 2013. This brainstorming session included presentations by Governing Board and HumRRO staff describing findings from previous studies and descriptions of other studies currently underway, followed by an open discussion of issues and possible additional areas of investigation. Each panelist was asked to use this information to propose a paper that he/she could develop. TAP members submitted nine proposals from which Governing Board staff commissioned five papers. Panelists have several months to develop the papers. The TAP will reconvene in a late summer 2014 symposium during which authors will present their papers and the entire panel will discuss implications for preparedness research. HumRRO will produce a proceedings document summarizing the commissioned papers and discussion. (A list of TAP members is included on the next page.)

In addition, HumRRO will produce a comprehensive project report at the conclusion of the contract in December 2014.

Work completed as of August 2014:

Evaluation of Alignment of Grade 8 and 12 NAEP to an Established Measure of Job Preparedness: Held two rounds of workshops to evaluate alignment between grade 8 and 12 NAEP Reading and Mathematics and WorkKeys. Four 6-person panels were convened in Louisville, Kentucky in June 2014 and the process was replicated in Alexandria, Virginia in July 2014. Analysis is underway.

O*NET Linkage: This task was completed in April 2014; see May 2014 COSDAM materials for details.

TAP Symposium: Governing Board staff reviewed proposals submitted by TAP panelists and commissioned four (4) papers to be completed by the panelists. Draft papers are under development. Authors will present final papers at the second TAP meeting on August 20, 2014.

Technical Advisory Panel (TAP) Members

John Campbell

Professor of Psychology
University of Minnesota
(Member, NAGB Technical Panel on 12th
Grade Preparedness Research, 2007-2008)

Michael Campion

Herman C. Krannert
Professor of Management
Purdue University

Gregory Cizek

Professor of Educational Measurement
and Evaluation
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Brian Gong

Executive Director of Center for Assessment
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Suzanne Lane

Professor, Research Methodology
University of Pittsburgh School of
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Barbara Plake

University Distinguished Professor,
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Ann Marie Ryan

Professor of Psychology
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Nancy Tippins

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White Paper on Transition to Technology Based Assessments

To help plan NAEP's transition from its current paper-based assessments to technology-based assessments (TBA), the National Center for Education Statistics (NCES) has commissioned a white paper that will describe the overall approach being taken to accomplish this transition and its rationale. There are many reasons why this transition must begin now for NAEP's core subject-areas: mathematics, reading, and science (the writing assessment is already technology based). Perhaps the most important reason, however, is that assessment and learning in schools across the country have already started this transition. In order for NAEP to remain relevant and meaningful in the broader educational landscape, the program must begin now to convert to technology-based assessments that reflect how students are being prepared for post-secondary work and academic experiences.

Of particular concern to the "Nation's Report Card" with its decades of valuable performance trends is the ability to maintain trend lines well into the future. As such, the program is planning a multistep process that will carefully and thoughtfully implement this important transition in a manner that is most likely to protect this valuable aspect. Whether or not trends can be maintained across paper-based and technology-based modes of administration is clearly an empirical question. All due care is being taken, however, to increase the likelihood that this important objective is achieved, and that NAEP will maintain its reputation as the gold standard of educational assessments.

In addition to the careful attention being paid to maintaining performance trend lines across paper-based and technology-based administration modes, the transition to TBA is being informed by the expert guidance of subject-area, cognitive-science, and measurement experts. This transition presents numerous opportunities to enhance our measurement of framework objectives, and possibly increase the program's relevance as a measure of preparedness for post-secondary pursuits. In addition, TBA presents numerous possibilities to extend and enhance NAEP's reporting capabilities and opportunities. To these ends, the white paper will focus on subject-specific issues and opportunities for leveraging technology delivery to enhance NAEP's measurement and reporting goals. The white paper is expected to be completed towards the end of summer 2014.

Update on Evaluation of NAEP Achievement Levels Procurement

Objective To receive a brief informational update from NCES on the current status of the procurement being planned to evaluate NAEP achievement levels. Ongoing updates will be provided at each COSDAM meeting.

Background

The NAEP legislation states:

The achievement levels shall be used on a trial basis until the Commissioner for Education Statistics determines, as a result of an evaluation under subsection (f), that such levels are reasonable, valid, and informative to the public.

In providing further detail, the aforementioned subsection (f) outlines:

(1) REVIEW-

- A. IN GENERAL- The Secretary shall provide for continuing review of any assessment authorized under this section, and student achievement levels, by one or more professional assessment evaluation organizations.
- B. ISSUES ADDRESSED- Such continuing review shall address--
 - (i) whether any authorized assessment is properly administered, produces high quality data that are valid and reliable, is consistent with relevant widely accepted professional assessment standards, and produces data on student achievement that are not otherwise available to the State (other than data comparing participating States to each other and the Nation);
 - (ii) whether student achievement levels are reasonable, valid, reliable, and informative to the public;-
 - (iii) whether any authorized assessment is being administered as a random sample and is reporting the trends in academic achievement in a valid and reliable manner in the subject areas being assessed;
 - (iv) whether any of the test questions are biased, as described in section 302(e)(4); and

- (v) whether the appropriate authorized assessments are measuring, consistent with this section, reading ability and mathematical knowledge.

(2) REPORT- The Secretary shall report to the Committee on Education and the Workforce of the House of Representatives and the Committee on Health, Education, Labor, and Pensions of the Senate, the President, and the Nation on the findings and recommendations of such reviews.

(3) USE OF FINDINGS AND RECOMMENDATIONS- The Commissioner for Education Statistics and the National Assessment Governing Board shall consider the findings and recommendations of such reviews in designing the competition to select the organization, or organizations, through which the Commissioner for Education Statistics carries out the National Assessment.

Responsively, a procurement has been planned to administer an evaluation of NAEP achievement levels. The last update COSDAM reviewed on this topic was in May 2014.

In the following brief written update, NCES provides the Committee with a summary of the status of this procurement.

Evaluation of NAEP Achievement Levels

The National Center for Education Evaluation and Regional Assistance (NCEE), part of the Institute for Education Sciences (IES), will administer the Evaluation of the NAEP Achievement Levels. NCEE and the Department of Education's Contracts and Acquisitions Management (CAM) office began this procurement during fiscal year 2014. A solicitation was released in early May

(https://www.fbo.gov/index?s=opportunity&mode=form&tab=core&id=f0bbb548714e156f0b2773fcbce6214d&_cview=0) and amended mid-June to revise the proposal due date to July 9, 2014.

According to the statement of objectives, a report (produced within 18 months of contract award), "...*should provide sufficient information upon which the Commissioner of NCES can determine if the trial designation of the NAEP reading and mathematics achievement levels at grades 4, 8, and 12 should be removed or whether the trial designation should be continued*" (page 4). The statement of objectives also includes a 6-month option to extend the contract to 24 months; if this option is exercised, the contractor would plan and conduct dissemination events to communicate the conclusions of the final report to various groups of stakeholders.