## National Assessment Governing Board
### Assessment Development Committee

May 12 – 13, 2016

## AGENDA

| Thursday, May 12 | 8:30 am – 4:00 pm | Closed Session  
Review of NAEP Items for Reading, Mathematics, Civics, U.S. History, and Geography  
Committee Discussion | Secure material provided under separate cover |
| --- | --- | --- | --- |
| Friday, May 13 | 10:00 – 10:05 am | Welcome, Introductions, and Agenda Overview  
*Shannon Garrison, Chair* |  |
| 10:05 – 10:40 am | Update on NAEP Topics  
- Technology and Engineering Literacy (TEL) Report Release Activities  
  *Mary Crovo, Deputy Executive Director*  
  *Cary Sneider, ADC Vice Chair*  
- NAEP Mathematics Framework and the Common Core State Standards: Session at the National Council on Measurement and Education (NCME)  
  Committee Discussion  
- NAEP Item Review Schedule  
  *Mary Crovo* | Attachment A  
Attachment B |
| 10:45 am – 12:15 pm | Closed Session  
Continued Review of NAEP Items  
Committee Discussion | Secure material provided under separate cover |
NAEP Mathematics Framework and the Common Core Standards

Session at the National Council on Measurement in Education (NCME)
April 10, 2016

On Sunday, April 10, 2016, the Governing Board hosted a session at the annual meeting of the National Council on Measurement in Education (NCME) to follow up on issues about the relationship between the NAEP Mathematics Framework and the Common Core State Standards (CCSS) in Mathematics—in particular a concern raised by the NAEP Validity Studies Panel (NVS) that the NAEP mathematics assessment at grade 4 includes some topics that now appear in later grades under the CCSS.

Executive Director Bill Bushaw introduced the session, presenters Michael Cohen of Achieve and Chester Finn of the Fordham Institute, and the moderator, Chair Terry Mazany. Mr. Bushaw noted that the audience included Board members Lucille Davy and Andrew Ho.

Michael Cohen

- The issue is not about how the NAEP Math Framework aligns to the Common Core State Standards, but rather how the framework relates to how mathematics is being taught across all 50 states, regardless of whether the Common Core State Standards are used.

- As the gold standard in assessment since its establishment, NAEP has been used to monitor achievement trends nationwide. NAEP is often used to audit and evaluate the rigor of state assessments and state achievement levels, such as Achieve’s comparisons of the percentage of students scoring at or above Proficient on NAEP and the percentage of students reaching Proficient on state assessments.

- When the NAEP Mathematics Framework was created, there was huge variation in terms of how mathematics was taught across states. At the current time, however, there is much more similarity in what mathematics topics are taught, even among states that never adopted or have un-adopted the Common Core State Standards.

- As long as state NAEP is used as the benchmark to judge state assessments, there are consequences to a mismatch between what is assessed by NAEP and what is commonly taught across the country. Therefore, the NAEP Mathematics Framework should be reviewed to determine whether it needs to be updated.
Chester Finn

- Mr. Cohen assumes that NAEP should be a servant of the states, which is a huge shift to NAEP’s role historically. In the 1960s, there was a promise that NAEP would not be used to evaluate states.

- While he acknowledged the alignment issues between NAEP and CCSS in mathematics, Mr. Finn noted that his viewpoint is political rather than psychometric.

- There has been a tremendous amount of change in recent years in state content standards, curricula, implementation, assessments, and accountability systems. NAEP is the only assessment that has been stable during a time of flux at the state level; NAEP is the only measuring stick that is not made of rubber.

- The American public has negative perceptions of the Common Core State Standards, and the integrity of NAEP will be at risk if it is associated with something that is so disliked.

- The NAEP program is heavily burdened with a current workload that includes the transition to digital-based assessments; inclusion of English language learners and students with disabilities; bridge studies; academic preparedness for college; assessment of new subjects; and several other initiatives.

- In an era of limited resources, the NAEP program already can’t afford everything that should be happening, such as state level administration of the grade 12 assessments in Reading and Mathematics or adding more districts to the Trial Urban District Assessment (TUDA) program. There are many priorities that should be more important than changing the NAEP Math Framework at this time.

Additional Remarks

- Mr. Cohen acknowledged the concerns about timing but noted that the Governing Board’s process for reviewing NAEP takes a considerable amount of time. He reiterated that NAEP cannot remain the gold standard if there is systematic bias in its measurement.

- Mr. Finn responded that it would be difficult for Congress to increase the budget for NAEP amidst new controversy and reiterated his political concerns. He added that even if the Governing Board’s pace for changing the framework is slow, merely an announcement of the intention to change the framework could trigger controversy that should be avoided at this time.
**Audience Feedback and Questions**

Chairman Terry Mazany moderated audience discussion, where the following points were raised:

- Governing Board policy calls for reconsidering the NAEP frameworks every decade, and it is time to review the Mathematics Framework under those guidelines.

- This is a tricky issue that begs for some level of compromise. If NAEP is testing things that states are not teaching, it is not clear how long NAEP will remain the gold standard.

- The mismatch between the NAEP Mathematics Framework and the mathematics currently being taught is not that large—how much of a mismatch can we handle before threatening trends? There could be an incremental shift to gradually change the framework while still maintaining trends.

- In response to the question of under what circumstances it would ever be the time to change the Mathematics Framework, Mr. Finn suggested waiting a few years—until after the 2016 election and possibly after the 2018 election. By this time, state content standards, testing plans, and cut scores should reach some kind of stability as well.
  - Mr. Cohen responded that he also would wait until after the 2016 election, but that any modifications to the framework would not be implemented before that time anyway given the Governing Board’s timeline for this work.

- One suggestion was to consider increasing the testing time for NAEP so that additional topics could be assessed. Mr. Cohen stated that this is not the time to make tests longer.

- In response to an analogy of dynamic frameworks to the consumer price index (CPI), Mr. Cohen responded that NAEP is already very complex and difficult to understand, and the use of an index would exacerbate that. Mr. Finn pointed out that there are several different CPIs rather than a single pristine CPI, and that the CPI is generally not used to track long term trends.

- One of the great contributions of NAEP is to have frameworks that reflect a consensus of what people think students should know—this is necessary to maintain the validity of interpretations of NAEP results.
  - Mr. Finn responded that frameworks are never a total consensus, and that NAEP is not only the property of educators—other stakeholders such as parents also have viewpoints on what students should know.
• It is not clear how the concept of probability can be understood by elementary school students. What is the message that NAEP is sending by continuing to include data topics in the grade 4 assessment?
  
  o Mr. Finn responded that it is unclear how taking out one piece of the framework and assessment may affect trend. The current framework could become the framework for measuring long-term trend if a new framework is adopted.

• What is the role of NAEP to audit and/or validate state test results? How important is this, because the answer has implications about the extent to which NAEP should chase what states are doing.
  
  o Mr. Cohen responded that NAEP has become an auditor and that it would be difficult to turn back the clocks on this use of NAEP, given that the federal government has required this audit function prior to adoption of the Common Core State Standards.
  
  o Mr. Finn countered that NAEP’s audit function is to get an independent report of how students are doing, not to evaluate state content or performance standards.
  
  o Mr. Cohen responded that it is impossible to separate an audit of student performance with an audit of state tests.

Mr. Mazany thanked the audience for their substantive feedback and noted the benefits of having long-term historical memory to learn from individuals who have preceded the current Board members.
## Assessment Development Committee
### Item Review Schedule
#### January 2016 – August 2016

**April 28, 2016**

<table>
<thead>
<tr>
<th>Review Package to Board</th>
<th>Board Comments to NCES</th>
<th>Survey/ Cognitive</th>
<th>Review Task</th>
<th>Approx. Number Items</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8/16</td>
<td>1/22/16</td>
<td>Cognitive</td>
<td>2019 Reading (8) Pilot (SBT) Draft builds</td>
<td>2 tasks</td>
<td>✓</td>
</tr>
<tr>
<td>1/25/16</td>
<td>2/16/16</td>
<td>Cognitive</td>
<td>2019 Reading (12) Pilot (SBT) Concept sketches</td>
<td>2 sketches</td>
<td>✓</td>
</tr>
<tr>
<td>2/24/16</td>
<td>3/11/16</td>
<td>Cognitive</td>
<td>2019 Math (12) Pilot (SBT) Concept sketches</td>
<td>3 - 4 sketches</td>
<td>✓</td>
</tr>
<tr>
<td>4/14/16</td>
<td>5/20/16</td>
<td>Survey</td>
<td>2018 Social Sciences (8) Pilot</td>
<td>130-140</td>
<td>✓</td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2019 Reading (4) Pilot (SBT) Draft builds</td>
<td>2 tasks</td>
<td>For Review at May Board Meeting</td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2018 US History (8) Pilot (DI)</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2018 Civics (8) Pilot (DI)</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2018 Geography (8) Pilot (DI)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2019 Reading (4, 8) Pilot (DI)</td>
<td>60-65</td>
<td></td>
</tr>
<tr>
<td>4/28/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2019 Math (4, 8) Pilot (DI)</td>
<td>270-275</td>
<td></td>
</tr>
</tbody>
</table>

---

Attachment B
<table>
<thead>
<tr>
<th>Review Package to Board</th>
<th>Board Comments to NCES</th>
<th>Survey/Cognitive</th>
<th>Review Task</th>
<th>Approx. Number Items</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/5/16</td>
<td>5/20/16</td>
<td>Cognitive</td>
<td>2019 Reading (12) Pilot (DI) Passage Review</td>
<td>4 Passages</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2019 Math (4, 8) Pilot</td>
<td>20*</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2019 Reading (4, 8) Pilot</td>
<td>10**</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2017 Math (4, 8) Operational</td>
<td>100***</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2017 Reading (4, 8) Operational</td>
<td>100***</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2017 Writing (8) Operational</td>
<td>100***</td>
<td></td>
</tr>
<tr>
<td>6/2/16</td>
<td>6/23/16</td>
<td>Survey</td>
<td>2017 Writing (4) Operational</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>6/27/16</td>
<td>7/15/16</td>
<td>Survey</td>
<td>2019 Science (4, 8, 12) Pilot Existing item pool review</td>
<td>100-110</td>
<td></td>
</tr>
<tr>
<td>7/20/16</td>
<td>8/12/16</td>
<td>Cognitive</td>
<td>2017 Reading (4, 8) Operational (DI)</td>
<td>20-25</td>
<td></td>
</tr>
<tr>
<td>7/20/16</td>
<td>8/12/16</td>
<td>Cognitive</td>
<td>2017 Writing (4) Operational (DI)</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>7/20/16</td>
<td>8/12/16</td>
<td>Cognitive</td>
<td>2017 Writing (8) Operational (DI)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>7/21/16</td>
<td>8/12/16</td>
<td>Cognitive</td>
<td>2017 Math (4, 8) Operational (DI)</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>7/20/16</td>
<td>8/12/16</td>
<td>Cognitive</td>
<td>2019 Reading (4) Pilot (SBT)</td>
<td>2 tasks</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** “SBT” indicates Scenario-Based Task  
“DI” indicates Discrete Item

* The number listed represents new items in addition to the 2017 Math operational items.  
** The number listed represents new items in addition to the 2017 Reading operational items.  
***These items were reviewed in May 2015 for inclusion in the 2016 Pilot. This will be a keep/drop review based on 2016 Pilot data. No new items will be added to the review package.
# National Assessment Governing Board

## Executive Committee

**May 12, 2016**  
**4:30-6:00 pm**

## AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:30 – 4:35 pm</td>
<td>Welcome and Agenda Overview</td>
<td><strong>Terry Mazany, Chair</strong></td>
</tr>
<tr>
<td>4:35 – 4:40 pm</td>
<td>Nomination Process for Board Vice Chair for the Term October 1, 2016 – September 30, 2017</td>
<td><strong>Terry Mazany</strong></td>
</tr>
</tbody>
</table>
| 4:40 – 5:20 pm | Governing Board Updates                                                 | *Education Policy Updates*  
*Mary Crovo, Deputy Executive Director*  
*Sharyn Rosenberg, Assistant Director for Psychometrics*  
*Evaluation of NAEP Achievement Levels*  
*Lily Clark, Assistant Director for Policy and Research* |
| 5:20 – 5:40 pm | Strategic Planning Initiative                                            | **Lucille Davy, Vice Chair**                                                 |
| 5:40 – 6:00 pm | NAEP Research Grants                                                    | **Peggy Carr, Acting Commissioner**                                          |
Evaluation of National Assessment of Educational Progress (NAEP) Achievement Levels

Background
Public Law 107-279 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.

Even after being in use for about 25 years and undergoing previous evaluations (1993, 1998, 2009), the achievement levels are still considered to be on a trial basis. Jack Buckley initiated a new evaluation during his tenure as National Center for Education Statistics (NCES) Commissioner to determine whether the trial status could be resolved.

About the Evaluation
The National Center for Education Evaluation and Regional Assistance (NCEE), part of the Institute for Education Sciences (IES), is administering the current evaluation of the NAEP achievement levels. On September 29, 2014, NCEE awarded a contract to The National Academy of Sciences to perform this work.

Objectives for the evaluation include the following:

- Determine how "reasonable, valid, reliable and informative to the public" will be operationalized in this study.
- Identify the kinds of objective data and research findings that will be examined.
- Review and analyze extant information related to the study's purpose.
- Gather other objective information from relevant experts and stakeholders, without creating burden for the public through new, large-scale data collection.
- Organize, summarize, and present the findings from the evaluation in a written report, including a summary that is accessible for nontechnical audiences, discussing the strengths/weaknesses and gaps in knowledge in relation to the evaluation criteria.
- Provide, prior to release of the study report, for an independent external review of that report for comprehensiveness, objectivity, and freedom from bias.
- Plan and conduct dissemination events to communicate the conclusions of the final report to different audiences of stakeholders.
Design
This study focuses on the achievement levels used in reporting NAEP results for the reading and mathematics assessments in grades 4, 8, and 12. Specifically, the study is reviewing developments over the past decade in the ways achievement levels for NAEP are set and used and will evaluate whether the resulting achievement levels are "reasonable, valid, reliable, and informative to the public." The study relies on an independent committee of experts with a broad range of expertise related to assessment, statistics, social science, and education policy. The project receives oversight from the Board on Testing and Assessment (BOTA) and the Committee on National Statistics (CNSTAT) of the National Research Council.

Members of the interdisciplinary review committee were selected in early 2015 (see below):

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Christopher F. Edley, Jr. (Chair)</td>
<td>The Opportunity Institute</td>
</tr>
<tr>
<td>Dr. Peter Afflerbach</td>
<td>University of Maryland, College Park</td>
</tr>
<tr>
<td>Dr. Sybilla Beckmann</td>
<td>University of Georgia</td>
</tr>
<tr>
<td>Dr. H. Russell Bernard</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Dr. Karla Egan</td>
<td>EdMetric LLC</td>
</tr>
<tr>
<td>Dr. David J. Francis</td>
<td>University of Houston</td>
</tr>
<tr>
<td>Dr. Margaret E. Goertz</td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td>Dr. Laura Hamilton</td>
<td>The RAND Corporation</td>
</tr>
<tr>
<td>Dr. Brian W. Junker</td>
<td>Carnegie Mellon University</td>
</tr>
<tr>
<td>Dr. Suzanne Lane</td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>Ms. Sharon J. Lewis</td>
<td>Retired (formerly with the Council of the Great City Schools)</td>
</tr>
<tr>
<td>Dr. Bernard L. Madison</td>
<td>University of Arkansas</td>
</tr>
<tr>
<td>Dr. Scott Norton</td>
<td>Council of Chief State School Officers</td>
</tr>
<tr>
<td>Dr. Sharon Vaughn</td>
<td>The University of Texas at Austin</td>
</tr>
<tr>
<td>Dr. Lauress L. Wise</td>
<td>HumRRO</td>
</tr>
</tbody>
</table>

Additional information about the Committee and project activities is available at: [http://www8.nationalacademies.org/cp/projectview.aspx?key=49677](http://www8.nationalacademies.org/cp/projectview.aspx?key=49677). The first Committee meeting took place in Washington, DC on February 19-20, 2015. Governing Board staff attended the open session and made a presentation to the Committee on the history of the NAEP achievement levels setting activities. The second meeting of the Committee took place in Washington, DC on May 27-28, 2015. Governing Board staff attended the open session on the afternoon of May 27th to listen to panel discussions involving representatives of the media, state and local policymakers, advocacy organizations, and the Common Core State Standards assessment consortia, about interpretations and uses of NAEP achievement levels. Several additional meetings were conducted in the latter half of 2015 in closed session. The final report is expected to be released in mid-2016.
Next steps
The final report is expected to be available soon. NCES and Governing Board staff will be briefed on the findings, and we will also arrange a briefing for Board members. The briefing for Board members will occur either via a webinar or during the August 2016 Board meeting, depending on the timing of when the report will be made available and disseminated to various stakeholder groups.

As stated in the NAEP legislation, the Commissioner of NCES will use the findings from the evaluation to decide whether the achievement levels should continue to be used on a “trial basis” or whether that designation can be removed. In addition, the final report may include conclusions and recommendations that have implications for future Governing Board achievement levels-setting activities. Public Law 107-279 also specifies that the Governing Board must prepare a formal response to the evaluation:

Not later than 90 days after an evaluation of the student achievement levels under section 303(e), the Assessment Board shall make a report to the Secretary, the Committee on Education and the Workforce of the House of Representatives, and the Committee on Health, Education, Labor, and Pensions of the Senate describing the steps the Assessment Board is taking to respond to each of the recommendations contained in such evaluation.

The Committee on Standards, Design and Methodology (COSDAM) will lead the process of responding to the evaluation and considering any potential implications for future achievement levels-setting work, with input from the full Board.
### AGENDA

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenter(s)</th>
<th>Attachments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 – 10:05 am</td>
<td>Welcome and Review of Agenda</td>
<td>Andrew Ho, COSDAM Chair</td>
<td></td>
</tr>
<tr>
<td>10:05 – 10:50 am</td>
<td>Computer Access and Familiarity Study</td>
<td>George Bohrnstedt, American Institutes for Research</td>
<td>Attachment A</td>
</tr>
<tr>
<td>10:50 – 11:40 am</td>
<td>NAEP Validity Framework</td>
<td>Fran Stancavage, American Institutes for Research</td>
<td>Attachment B</td>
</tr>
<tr>
<td>11:40 am – 12:10 pm</td>
<td>Key Findings and Actions from NAEP Linking Studies</td>
<td>Sharyn Rosenberg, Assistant Director for Psychometrics</td>
<td>Attachment C</td>
</tr>
<tr>
<td>12:10 – 12:15 pm</td>
<td>Information Items</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Update on Evaluation of NAEP Achievement Levels</td>
<td></td>
<td>Attachment D</td>
</tr>
<tr>
<td></td>
<td>• Student Engagement in NAEP: Critical Review and Synthesis of Research</td>
<td></td>
<td>Attachment E</td>
</tr>
<tr>
<td></td>
<td>• 2017 Writing Grade 4 Achievement Levels Setting Procurement</td>
<td></td>
<td>Attachment F</td>
</tr>
</tbody>
</table>
Developing New Indices to Measure Computer/Technology Access and Familiarity

As NAEP moves to becoming a fully digitally-based assessment (DBA), one concern is the degree to which all children are ready for a move to a DBA. In particular, NAEP needs to consider the extent to which all students have the same access to, and familiarity with, the tablet [or digital] technology being used to collect the data, as well as the extent to which access and familiarity with digital technology is correlated with performance on NAEP DBA assessments in reading, mathematics, and science at grades 4, 8 and 12. Assuming that there is a measurable relationship to performance, a second but equally important question is whether access and familiarity differ for disadvantaged students (e.g., Black students, Hispanic students, and students eligible for the National School Lunch Program (NSLP)) compared to non-disadvantaged students.

The current computer access and familiarity study (CAFS) has been or will be investigating this concern by:

1. Developing and administering new student-level items to be used in creating indices of digital technology access and familiarity,
2. Assessing the reliability of these indices, and
3. Analyzing the distribution of these indices across NAEP’s subpopulations and the relationship between the indices with achievement on NAEP administered as a paper based assessment (PBA) and as a DBA.

The specific research questions to be addressed by these activities are:

1. Do the access and familiarity items cluster together in ways that suggest that reliable indices of each can be constructed?
2. For those who take the DBA version of the assessment, what is the relationship between access/familiarity and performance on NAEP reading, mathematics, and science? Are these relationships constant across gender and race/ethnic groups?
3. Do the observed relationships between access and familiarity and NAEP performance persist when controlling for SES?
4. What is the differential validity of the two measures in predicting NAEP performance as a function of mode of administration?
5. Are access and familiarity differentially distributed across gender, race/ethnicity and/or SES? If so, and if there is a relationship between access and familiarity and NAEP performance for those taking the DBA version, does this raise equity issues about the use of a technology-based NAEP assessment?
The CAFS surveys were administered to samples of 4th (N=5247), 8th (N=6233) and 12th (N=5628) graders who took the 2015 NAEP reading, mathematics or science assessment. The samples were also split between those in the PBA and DBA conditions. (The CAFS survey will also be re-administered as part of the 2017 assessment.) Data cleaning has been completed and the structure of covariation among the items is currently being examined at grades 4 and 8 for the DBA and PBA samples in reading and mathematics. (The NAEP science performance data are not yet available to merge with the CAFS data and analysis of the grade 12 data have been delayed slightly because of some analysis difficulties).

Initial analyses suggest that access is best represented as having two subdomains—access at home and access at school. Familiarity appears to have four subdomains (three at grade 4) – familiarity based on instruction at school, familiarity with tablets, familiarity with laptops or desktops, and familiarity with digital technology concepts (grades 8 and 12 only).

The goal of follow-up analyses is to construct a common set of indices across grades 4, 8 and 12 that will measure the various subdomains of access and familiarity. The indices will then be used to examine the research questions noted above. All analyses will be done separately for grades 4, 8 and 12 and by gender, NSLP status and race/ethnicity.
Since its inception in 1995, the NAEP Validity Study (NVS) Panel has been engaged in research on various aspects of the validity of the NAEP assessment program. The choice of topics was informed by the judgments of both panel members and the National Center for Education Statistics (NCES) regarding the most pressing validity research needs at any given point in time. In October 2002, NCES asked the panel to put together a framework for their work and also asked the panel to be more forward looking in generating possible research topics to be studied. As a result of this request, in 2002, the panel developed a research agenda that was based on a framework defined by categories:

1. The constructs measured within each of NAEP’s subject domains
2. The manner in which these constructs are measured
3. The representation of the population to be assessed
4. The analysis of data
5. The reporting and use of NAEP results
6. The assessment of trends

This framework, which was published as an NVS report, continued to be used as an organizing tool for the panel for several subsequent annual updates to the validity research agenda until the recent past.

However, by the start of the current five-year contract (2013-2018), it was time to update the NVS framework in light of more recent developments. The most notable of these was criticism from a Congressionally-mandated evaluation of the NAEP program that was completed in 2009 by scholars from the Buros Center for Testing at the University of Nebraska–Lincoln and the Center for Educational Assessment at the University of Massachusetts–Amherst. The evaluators argued that the then-current approach to NAEP validity research seemed to imply that the validity of NAEP was in the instrument rather than in the uses to which NAEP has been put. Instead, validity must be established for each purpose or use. More specifically the evaluation said: “Validation is an ongoing process because it is the interpretation or use of assessment results that are supported (validated), not the assessment instrument itself.” (Buckendahl, Davis, Plake, Sireci, Hambleton, Zenisky and Wells, 2009, p.xvii). They also noted that, in their view, much of the validity research that NCES had done to this point in time was piecemeal and without the benefit of a comprehensive framework. The specific language the evaluators used is: “NAEP has not had the benefit of a comprehensive framework to guide the systematic accumulation of evidence in order to substantiate the ways in which its assessment results may be reasonably interpreted and applied.” (Buckendahl et al., p.xi). Finally, they argued that “there is a need for an ongoing, systematic appraisal of the
validity of the interpretations and uses being built on the NAEP assessments.” (Buckendahl et al., p.14).

In response to the criticism of Buckendahl et al. (2009), NCES requested AIR’s NAEP Education Statistical Services Institute (NESSI) to construct a comprehensive NAEP validity framework based on the uses to which NAEP is put. In order to keep the task a manageable one, the NESSI team decided to focus only on uses designated by the federal government. That is, the framework does not include the various non-official uses to which researchers might employ NAEP.

The NESSI staff identified five such official uses:

1. Monitoring student performance at a given point in time in mathematics, reading and other subjects at grades 4 and 8 (and at grade 12) at the national, state and selected district levels using both scale scores and achievement levels.
2. Monitoring trends in mathematics, reading and other subjects (and at grade 12) at the national, state and district levels and reported both by scale scores and achievement levels.
3. Comparing the performance of achievement across states and districts as well as internationally.
4. Disaggregating and reporting results by race, ethnicity, socioeconomic status, gender, disability and limited English proficiency.
5. Using NAEP results to inform and evaluate federal educational policies.

The team then asked what validity questions would have to be answered to be able to assess the validity of a particular use. The crossing of the various uses of NAEP by its related validity questions resulted in the validity framework.

By agreement with NCES, NVS used the NESSI framework as a starting point for the new framework, which was primarily intended to provide structure for an NVS review of prior research on NAEP validity and to guide the choice of topics for future NVS validity studies. NVS retained the fundamental organization of the framework, and made relatively minor refinements based on the research questions that we saw emerging in our review of extant studies. The full NVS framework is attached.

At present, the 2013 NVS validity framework has not been widely disseminated, although it has appeared in briefing materials for several NVS panel meetings.

Reference:

<table>
<thead>
<tr>
<th>The Intended Use of NAEP Data</th>
<th>Questions NAEP should consider given its intended use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use I.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A status measure of what students know and can do</strong></td>
<td>1. To what extent are the NAEP frameworks valid for conceptualizing what is meant by mathematics, reading, or other subject areas given the variation in how they are taught in the United States?</td>
</tr>
<tr>
<td>From Legislation</td>
<td></td>
</tr>
<tr>
<td>A. Providing a measure of student achievement in mathematics, reading, and other subjects at grades 4, 8, and 12 at the national level.</td>
<td>2. To what extent do the item pools adhere to accepted standards of high quality?</td>
</tr>
<tr>
<td>B. Providing a measure of student achievement in mathematics and reading at grades 4 and 8 at the state level.</td>
<td>a. Do the items (collectively) cover the framework objectives for each of the content areas?</td>
</tr>
<tr>
<td>C. Providing achievement levels that are consistent with relevant widely accepted professional assessment standards and based on the appropriate level of subject matter knowledge for grade levels to be assessed (or the age of the students).</td>
<td>b. Is the size and composition of the item pool sufficient to both adequately cover the framework and measure the high- and low-performing populations?</td>
</tr>
<tr>
<td>From the Governing Board</td>
<td></td>
</tr>
<tr>
<td>D. Providing a measure of student achievement in mathematics and reading at grades 4 and 8 for participating urban districts.</td>
<td>c. Are the item types used (e.g. multiple-choice, extended response, Hands-on, etc.) sufficient to measure the contents being assessed?</td>
</tr>
<tr>
<td>E. Providing evaluative statements regarding levels of student achievement.</td>
<td>3. To what extent do the individual items adhere to accepted standards of high quality?</td>
</tr>
<tr>
<td></td>
<td>a. Does each item fit within the framework?</td>
</tr>
<tr>
<td></td>
<td>b. Are the items free of bias, free of construct irrelevant characteristics, and accessible to all students?</td>
</tr>
<tr>
<td></td>
<td>c. In the case of translated items, are they valid for inferences for the population being assessed?</td>
</tr>
<tr>
<td></td>
<td>4. To what extent are results confounded by student factors that introduce construct irrelevant variance? These include:</td>
</tr>
<tr>
<td></td>
<td>a. Motivation/engagement</td>
</tr>
<tr>
<td></td>
<td>b. Other student factors such as test taking strategies</td>
</tr>
<tr>
<td></td>
<td>5. To what extent are the psychometric and statistical methods used valid for drawing inferences about student performance? Including:</td>
</tr>
<tr>
<td></td>
<td>a. Psychometric models – including correct functional form / model specification</td>
</tr>
<tr>
<td></td>
<td>b. Estimation of error (measurement, sampling and equating) in the scaling of items and the estimation of population parameters</td>
</tr>
<tr>
<td></td>
<td>c. Conditioning analyses (i.e., the conditioning model used to create the plausible values)</td>
</tr>
<tr>
<td></td>
<td>d. Equating scales across administrations</td>
</tr>
<tr>
<td></td>
<td>e. Scoring processes, including the use of machine scoring for extended responses</td>
</tr>
<tr>
<td>The Intended Use of NAEP Data</td>
<td>Questions NAEP should consider given its intended use</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Use I.</strong></td>
<td>f. Imputation procedures (e.g., missing data analysis, treatment of items not reached, conditioning analyses)</td>
</tr>
<tr>
<td>A status measure of what students know and can do (continued)</td>
<td>g. Differential item functioning analyses</td>
</tr>
<tr>
<td></td>
<td>h. Cross-grade scaling (where used)</td>
</tr>
<tr>
<td>6.</td>
<td>To what extent do the sampling and weighting procedures allow for drawing valid inferences about student performance? Including:</td>
</tr>
<tr>
<td></td>
<td>a. Sample design (items and students)</td>
</tr>
<tr>
<td></td>
<td>b. Sample sizes</td>
</tr>
<tr>
<td></td>
<td>c. Models used to distribute items (e.g., blocks construction)</td>
</tr>
<tr>
<td></td>
<td>d. Response rates (state, school and individual)</td>
</tr>
<tr>
<td></td>
<td>e. Weighting procedures</td>
</tr>
<tr>
<td>7.</td>
<td>To what extent do the administration procedures used allow for drawing statistically valid inferences about student performance? Do the procedures change the construct being measured? Including:</td>
</tr>
<tr>
<td></td>
<td>a. Mode of administration (e.g., paper and pencil, computer, tablet)</td>
</tr>
<tr>
<td></td>
<td>b. Standardization of administration conditions</td>
</tr>
<tr>
<td></td>
<td>c. Accommodations and exclusions procedures and the standard application of those procedures</td>
</tr>
<tr>
<td>8.</td>
<td>To what extent are the achievement levels statistically and psychometrically defensible, and meaningful? Including:</td>
</tr>
<tr>
<td></td>
<td>a. Standard setting methods and processes</td>
</tr>
<tr>
<td></td>
<td>b. Consequential data (e.g., from external empirical studies) resulting from the cut scores selected</td>
</tr>
<tr>
<td>9.</td>
<td>To what extent does the reporting of results (e.g., Nation’s Report Card) accurately reflect the statistical findings of the assessment? Including:</td>
</tr>
<tr>
<td></td>
<td>a. Are NAEP reports understandable for the general public and education policymakers?</td>
</tr>
<tr>
<td></td>
<td>b. Does statistical significance get confounded with substantive significance?</td>
</tr>
<tr>
<td></td>
<td>c. Is there a shared understanding among target audiences about what the achievement levels mean?</td>
</tr>
<tr>
<td>10.</td>
<td>To what extent do the data provided to users for secondary data analysis allow for analyses that will yield valid parameter estimates?</td>
</tr>
</tbody>
</table>
### The Intended Use of NAEP Data

### Use II.
**Comparisons over time (Trends)**

**From Legislation**
- Providing a measure of trends in mathematics, reading, and other subjects at grades 4, 8 and 12 at the national level.
- Providing a measure of trends in mathematics and reading at grades 4 and 8 at the state level.
- Providing a measure of academic achievement at ages 9, 13, and 17 for the purpose of maintaining long-term trends in reading and mathematics.

**From the Governing Board**
- Providing a measure of trends in mathematics and reading at grades 4 and 8 for participating urban districts.

### Questions NAEP should consider given its intended use

1. To what extent are comparisons over time valid given changes (or stability) in NAEP frameworks? Including:
   a. Periodic revisions to the NAEP frameworks, individually or cumulatively, that occur in response to changes in state and district educational practices
   b. Other changes to the content or structure of the NAEP frameworks (e.g., if reading and writing were combined into one assessment)
2. To what extent is the validity of long-term trend (LTT) affected for the current population of students given changes that have occurred in curricula in the U.S.?
3. To what extent is the validity of NAEP affected by confounding factors that affect the measurement of the constructs over time (e.g., demographic changes)?
4. To what extent is there a valid interpretation for what a unit change in the scale score means?
5. To what extent are comparisons over time affected by changes in SD/ELL populations, exclusion rates, and exclusion policy?
6. To what extent is the NAEP trend data valid given changes over time in the administration or measurement process (e.g., change in mode of administration, use of computer adaptive testing, a new IRT model, change in the length of blocks)?
7. To what extent is the validity of the NAEP scale affected over time by the required release of NAEP items after each administration?

### Use III.
**Comparisons of entities (States, Districts, Nations)**

**Federal Government**
- Providing a measure of student achievement for comparing student achievement across states.
- Providing a measure of student achievement for comparing student achievement across urban districts.
- Providing a measure to compare student performance at national and state level to international students (e.g., international benchmarking using NAEP-TIMSS link).

### Questions NAEP should consider given its intended use

1. To what extent are comparisons across states and nations valid given the degree of alignment between the NAEP frameworks and states’ content standards or international assessment frameworks?
2. To what extent is the validity of comparisons across entities affected by differences in participation and exclusion rates (including differences due to different inclusion and accommodation policies)?
3. To what extent are the validities of cross- and within-district comparisons affected by differing or changing definitions of urban districts in the TUDA (e.g., inclusion or exclusion of charter schools)?
4. To what extent is the validity of comparisons with other nations, affected by different languages, engagement factors, and the compositions of the target populations (e.g., differences in populations attending school)?
5. To what extent are samples large enough to detect meaningful differences between
<table>
<thead>
<tr>
<th>The Intended Use of NAEP Data</th>
<th>Questions NAEP should consider given its intended use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>entities within a year and across years within entities?</td>
</tr>
<tr>
<td></td>
<td>6. To what extent does the reporting of results across entities accurately reflect and convey the findings of the assessments (e.g., accurately reporting statistical significance)?</td>
</tr>
<tr>
<td></td>
<td>7. To what extent are comparisons across states and nations affected by the linking methods used?</td>
</tr>
<tr>
<td>The Intended Use of NAEP Data</td>
<td>Questions NAEP should consider given its intended use</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td><strong>Use IV.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Disaggregating groups</strong></td>
<td></td>
</tr>
<tr>
<td><em>From Legislation</em></td>
<td></td>
</tr>
<tr>
<td>A. Providing information on special groups at the national level, including, whenever feasible, information collected, cross tabulated, compared, and reported by race, ethnicity, socioeconomic status, gender, disability and limited English proficiency;</td>
<td>1. To what extent is the validity of analyses of disaggregated groups (including gap analyses) affected by differences in construct equivalence across the groups (e.g., difference in science achievement due to different English language ability, changes in construct being measured due to a provided accommodation)?</td>
</tr>
<tr>
<td><em>From the Governing Board</em></td>
<td></td>
</tr>
<tr>
<td>B. Monitoring trends and achievement gaps at the state level disaggregated by race, ethnicity, socioeconomic status, gender, disability, and limited English proficiency.</td>
<td>2. To what extent is the validity of results affected by the reliability of the reporting variables (e.g., socioeconomic status, gender, disability, and limited English proficiency)?</td>
</tr>
<tr>
<td>C. Monitoring trends and achievement gaps at the urban school district level disaggregated by race, ethnicity, socioeconomic status, gender, disability, and limited English proficiency.</td>
<td>3. To what extent is the validity of analyses of disaggregated groups affected by changes in the definitions of reporting variables over time (e.g., changes in the definitions of race categories)?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. To what extent is the validity of analyses of disaggregated groups (including gap analyses) affected by differences in measurement precision across the groups (e.g., validity of reporting achievement in Puerto Rico due to imprecise measurement at the low end of the achievement scale)?</td>
</tr>
<tr>
<td></td>
<td>5. To what extent is the validity of analyses of disaggregated groups (including gap analyses) affected by differences in participation and exclusion rates across the groups?</td>
</tr>
<tr>
<td></td>
<td>6. To what extent is the validity of analyses of disaggregated groups (including gap analyses) affected by differential effects of mode of administration across subgroups?</td>
</tr>
</tbody>
</table>
### The Intended Use of NAEP Data

**Use V. Informing policy and evaluating programs**

**From NAGB**

A. Measuring 12th grade preparedness for college and workplace training

**From NCES**

B. Providing a secondary source of information that can be used as one criterion for confirming increases in student achievement in grades 4 and 8 reading and mathematics (relative to the goal of all students reaching proficiency) on state assessments under NCLB.

C. Mapping state standards onto NAEP.

D. Monitoring state progress on their state assessments

**Other**

E. Identifying states with increased student achievement and decreased achievement gaps due to specific educational policies or reforms in those states.

F. Identifying changes in uses of technology in the classroom over time

G. Identifying how changes in the economy affects student performance

### Questions NAEP should consider given its intended use

1. To what extent is the validity of comparisons of state assessments and NAEP results affected by differences in the content coverage of the state tests and NAEP?

2. To what extent is the validity of comparing NAEP to state assessments affected by differences in the tests (e.g., item formats, mode of administration, test difficulty, test reliability, definitions of subgroups)?

3. To what extent is it valid to use NAEP as a common metric for cross-state and within-state-over-time comparisons of proficiency standards?

4. To what extent are the contextual items (e.g., parent education, school resources, school climate, teacher qualifications, and teacher practices) accurately measured so that they can validly be used to evaluate potential factors that impact achievement in order to inform policy?

5. To what extent are comparisons of state assessments and NAEP results valid given differences in student engagement when taking the two assessments?

6. To what extent are comparisons of state assessments and NAEP results valid given differences in participation and exclusion rates?

7. To what extent is NAEP valid for evaluating the impact of changes in policy at the national, state, and district (TUDA) levels?

8. To what extent is NAEP valid as a predictor of postsecondary outcomes? Is there variability in which postsecondary outcomes NAEP can predict (e.g., college attendance versus job performance)? What is the concurrent validity of NAEP with other indicators of postsecondary preparedness?

9. To what extent are NAEP achievement levels valid for policy purposes (e.g., are they meaningful and defensible as standards)?
Key Findings and Actions from NAEP Linking Studies

During the November 2015 and March 2016 Governing Board meetings, the Committee on Standards, Design and Methodology (COSDAM) had brief discussions about various studies that were conducted (by both NCES and the Governing Board) to link NAEP to other assessments or data sources. Linking studies involve comparisons between two assessments allowing one to see where a score point on one of the assessments would fall on the scale of the other assessment. One question raised by COSDAM members was about how the findings from these linking studies are actionable. This presentation is intended to provide an overview of the primary ways in which NAEP linking study results have been used.

Sharyn Rosenberg of the Governing Board staff and William Tirre of NCES will discuss the primary ways in which NAEP linking studies have been used, based on findings from studies conducted during the past ten years:

- To estimate state-level performance on international assessments
- To inform the development of a new measure of socio-economic status
- To compare state performance standards on a common scale
- To compare NAEP achievement levels with external benchmarks
- To estimate the percentage of students academically prepared for college

As background to the presentation, an overview of each study to be discussed is provided. The presentation will focus on the key findings and actions rather than the design and methodology of each study. COSDAM has been briefed on most of these studies during previous Board meetings.
2011 NAEP-Trends In Mathematics and Science Study (TIMSS) Linking Study

**Purpose:** TIMSS is an international comparison study of student achievement in mathematics and science at grades 4 and 8, administered every four years. The purpose of conducting the 2011 NAEP-TIMSS linking study was two-fold. The study was conducted to see whether it is possible to predict TIMSS scores (in mathematics and science) for the states that did not participate in the TIMSS assessment. Secondly, the study was conducted to identify a method among various methodologies suggested in the literature for linking two assessments. The study was done at grade 8 only.

**Sample:** The study involved four samples of students at grade 8: the 2011 NAEP operational/national sample, the 2011 TIMSS U.S. operational/national sample, students assessed using 2011 NAEP administration procedures who received braided booklets containing one block of NAEP and one block of TIMSS items; and students assessed using 2011 TIMSS administration procedures who received one block of NAEP items and three blocks of TIMSS items. In addition to these linking study samples, nine states—Alabama, California, Colorado, Connecticut, Indiana, Florida, Massachusetts, Minnesota, and North Carolina—participated in 2011 TIMSS as separate jurisdictions to serve as the “validation sample”.

**Statistical method used to establish the link:** Three types of statistical linking were considered in this study: statistical moderation, statistical projection, and IRT calibration.

**Main findings:** Selected findings are highlighted below ([link to NAEP-TIMSS linking study report](#)).

**For Mathematics:**
- Average scores for public school students in 36 states were higher than the TIMSS average of 500.
- Scores ranged from 466 for Alabama to 561 for Massachusetts.
- Massachusetts scored higher than 42 of the 47 participating education systems.
- Alabama scored higher than 19 education systems.

**For Science:**
- Average scores for public school students in 47 states were higher than the TIMSS average of 500.
- Scores ranged from 453 for the District of Columbia to 567 for Massachusetts.
- Massachusetts and Vermont scored higher than 43 participating education systems.
- The District of Columbia scored higher than 14 education systems.

The evaluation of results showed that all three methods of linking yielded essentially the same predicted TIMSS results. In addition, among the three methods, the statistical moderation technique is the simplest method requiring the estimation of the fewest parameters and could be applied to the extant national samples of NAEP and TIMSS. ([link to NAEP-TIMSS linking study technical report](#)).

**Application to NAEP:** The predicted TIMSS scores for states were reported and compared to other countries. This study also helps NCES conduct future NAEP-TIMSS linking studies using statistical moderation without the additional resources needed for the braided-booklet samples.
2015 NAEP-TIMSS Linking Study

**Purpose:** The purpose of conducting the 2015 NAEP-TIMSS linking study is to predict TIMSS scores for the states that did not participate in the 2015 TIMSS assessment.

**Sample:** The study design involves two samples of students: (a) students assessed in NAEP paper-based mathematics or science during the winter (January–March) 2015 NAEP administration (NAEP operational/national sample) and (b) students in the United States assessed in TIMSS (mathematics and science) during the spring (April–June) 2015 TIMSS administration (TIMSS U.S. operational/national sample). Florida is the only state that participated in 2015 operational TIMSS as a separate jurisdiction. Its actual TIMSS results can be used to validate the predicted state TIMSS results.

**Statistical method used to establish the link:** Statistical moderation will be used in this study.

**Main findings:** Analysis will start in early 2017, following the release of the 2015 TIMSS results at the end of 2016. A decision is pending on whether to conduct the NAEP-TIMSS linking study at both grades 4 and 8 or one grade only.

**Application to NAEP:** As an outcome of the study, the predicted TIMSS scores for states will be evaluated for possible reporting including comparisons to countries participating in TIMSS.
2011 NAEP- Progress in International Reading Literacy Study (PIRLS) Linking Study

**Purpose:** PIRLS is an international comparison study of reading literacy at grade 4, administered every five years. The purpose of this study was to obtain a statistical comparison between NAEP and PIRLS. The results of the 2011 NAEP grade 4 reading assessment were expressed in terms of the metric of the 2011 PIRLS assessment thereby providing international benchmarks for the NAEP grade 4 reading achievement levels.

**Sample:** Separate operational national samples of 2011 NAEP and 2011 PIRLS (the design did not include administering both assessments to a common sample of students). Florida did participate in 2011 PIRLS at the state level and was used to validate the linking results.

**Statistical method to establish the link:** Statistical moderation was used.

**Main findings:** At each level, the linking shows that the NAEP grade 4 reading achievement levels are higher than the PIRLS international benchmarks. The study report can be found at: [http://files.eric.ed.gov/fulltext/ED545246.pdf](http://files.eric.ed.gov/fulltext/ED545246.pdf)

When the actual PIRLS results for Florida were compared to the projected PIRLS results, the mean difference was not statistically significant. The only significant difference between the two sets of results for Florida was for the percentage of Advanced students (which varied by only one percentage point).

**Application to NAEP:** The fact that NAEP reading achievement levels are higher than similar PIRLS international benchmarks may help explain why NAEP has historically reported lower rates of reading proficiency for the United States, whereas PIRLS has historically reported higher levels of reading proficiency. For example, in 2011, NAEP reported that 34 percent of fourth graders were reading at the proficient level, while PIRLS reported that 56 percent were reading at the high international benchmark.

**Purpose:** ECLS-K is a longitudinal study conducted by NCES to follow a cohort of students who entered kindergarten during the 1998-1999 school year through their eighth grade year in 2006-2007. The study includes data collected from students, parents, teachers, and schools. The linking study served at least two purposes. One research study investigated the relationship between ECLS-K reading proficiency levels and 8th-grade NAEP achievement levels and explored the relationship between reading performance at earlier grades and performance on the 8th-grade NAEP reading assessment. Another research study investigated the concordance of student-reported parental education on the NAEP student background questionnaire with parent reports on the same variable from the ECLS-K questionnaire.

**Sample:** Data came from a common sample of public school students (n=1,290) who took both NAEP and ECLS-K grade 8 reading assessments in spring of 2007.

**Statistical method to establish the link:** Projection by regression was used in this study.

**Main findings:** The correlation between NAEP Reading and ECLS Reading at grade 8 was estimated at $r = .83$.

*Reading Analysis:* The link allowed a comparison between NAEP grade 8 achievement levels in reading and the finer grain and developmentally descriptive ECLS reading proficiency levels. Reading skills students need to master in earlier grades to later reach NAEP’s Proficient level at grade 8 were identified.


*Parental Education Analysis:* With few exceptions, the higher the parent’s education, the more accurate the student estimates are of what their parent’s education is as reported by one of the parents. Consistent with this result, the higher the parent’s education, the lower the percentage of students who report “I don’t know”. The high polychoric correlations computed with the “don’t knows” eliminated and the relatively small bias in analyses using student-reported parental education instead of parent-reported suggest that in spite of the inaccuracies in student reports of parental education, valuable information is nonetheless contained in students’ reports of parental education.


**Application to NAEP:** Information from this study on SES is being considered among other pieces of information in the formulation of a new SES measure.
2015 NAEP-ECLS Kindergarten Cohort of 2010-2011

**Purpose:** ECLS-K is a longitudinal study conducted by NCES to follow a cohort of students who entered kindergarten during the 2010-2011 school year through their fifth grade year in 2015-2016. The study includes data collection from students, parents, teachers, schools, and care providers. The parent interviews include information about income and parental education. The aim of the NAEP/ECLS-K special study is to evaluate the accuracy of grade 4 student reported parental occupation and education (the piloted NAEP SES-related questions), using the ECLS-K parent reported occupation and education as a reference. The results will be useful to inform development and interpretation of SES measures.

**Sample:** About 1,500 grade 4 students were assessed for both NAEP and ECLS-K in 2015 and were given an extended NAEP student questionnaire. The extended student questionnaire included a set of SES questions on parental occupation and education which are also being administered as part of the 2016 NAEP pilots, and were tested in cognitive interviews prior to administration in the special study.

**Statistical method used to establish the link:** Data from the ECLS-K and NAEP datasets will be merged by matching students based on common identification. Where available, one or both parents were interviewed as part of the 2015 ECLS-K grade 4 data collection, including SES-related questions of occupation and education. For households with two parents, the mother and father were interviewed separately.

**Main findings:** N/a. Analyses are currently underway.

**Application to NAEP:** The goal of this study is to define an SES measure for use in reporting 2017 results. Results of this analysis will inform the selection of SES items for operational administration in 2017.
2009 Preparedness Research: Statistical Linking of NAEP and the SAT

**Purpose:** This study was conducted as part of the Governing Board’s research program on using NAEP as an indicator of academic preparedness for college. The purpose of this study was to identify a reference point or range on the NAEP 12th grade reading and mathematics scales that might be associated with the College Board’s SAT preparedness benchmarks. The NAEP and SAT scores for 12th grade students who had taken NAEP in 2009 and had also taken the SAT were the basis for this linking (via an agreement with the College Board).

**Sample:** The overall NAEP sample size for 2009 12th grade was 49,000 (reading) and 46,000 (math). Students who also took the SAT were matched to NAEP resulting in 16,200 students (reading) and 15,300 students (mathematics), or approximately 33% of students. Note this was conducted for public-school students only. This match rate compares favorably to the national SAT participation rate of approximately 36% of public school students.

**Statistical method used to establish the link:** Two types of statistical linking were considered in this study: concordance and projection. Projection was preferred primarily due to the moderate correlation of 0.74 for NAEP reading and SAT-reading. (The correlation for math was 0.91.)

**Main findings:** Based on the College Board’s designation of 500 as the preparedness benchmark for each subject at the time the study was conducted, using statistical projection defined the preparedness cut-point for NAEP at 302 (reading) and 164 (math). Note that 302 is the reading proficient cut score and 176 is the math proficient cut score. A report of the results is available on the Governing Board website at [link to NAEP/SAT Report].

**Application to NAEP:** Findings from this study and others were used to report estimates of the percentage of students academically prepared for college in the 2013 and 2015 NAEP grade 12 report cards. A similar methodology will be applied in a planned linking study of 2013 12th grade NAEP and ACT data at the national level (via a data sharing agreement with ACT) and for a few states (via data sharing agreements with states). In addition, 2013 12th grade NAEP and SAT scores will be linked for students in one state via a data sharing agreement with Massachusetts.
2013 State Mapping Study

**Purpose:** Since 2003, NCES has conducted studies, which compare each state’s academic performance levels in reading and mathematics in grades 4 and 8 by placing the state standards onto the NAEP scale, which is a common metric for all states. These studies, also known as “state mapping” studies, allow states to examine (a) how stringent their state’s academic proficiency criteria compare to other states, and (b) whether the rigor of its own standards has changed over time.

**Data sources:** The study involved two sets of data:
a. The NAEP data from the 50 states and the District of Columbia that participated in the 2011 and 2013 reading and mathematics assessments.
b. State assessment school-level achievement data from the 2010-2011 and 2012-2013 school years provided by each state. The state alternate and modified assessments were excluded from the state mapping studies.

**Statistical method to establish the link:** By comparing the percentages of students in each NAEP school who achieve each of a state’s performance standards with the distribution of NAEP performance by the random sample of students participating in NAEP in the school, we can approximately estimate the position of each of the state standards on a common scale. The method employed to map the state standards and the NAEP scores is known as equipercentile equating. Detailed information on the estimation methods is available at [http://nces.ed.gov/nationsreportcard/pdf/studies/2010456.pdf](http://nces.ed.gov/nationsreportcard/pdf/studies/2010456.pdf).

**Main findings:** Results discussed here are from the most current state mapping study available to the public, which was conducted using NAEP and public school data from 2011 and 2013.

1. State proficiency standards for grade 4 reading and mathematics classified into NAEP achievement levels: 2013
   - In reading: The range of the states’ NAEP equivalent scores for the “proficient” level, as defined by each state, was 76 points on the 0-500 NAEP scale (twice the size of the standard deviation of the NAEP grade 4 reading assessment)
   - In mathematics: The range of the states’ NAEP equivalent scores for the “proficient” level, as defined by each state, was 49 points on NAEP 0-500 scales (1.5 times the size of the standard deviation of the NAEP grade 4 mathematics assessment)

2. State proficiency standards for grade 8 reading and mathematics classified into NAEP achievement levels: 2013
   - In reading: The range of the states’ NAEP equivalent scores for the “proficient” level, as defined by each state, was 83 points on NAEP 0-500 scales (twice the size of the standard deviation of the grade 8 reading assessment)
   - In mathematics: The range of the states’ NAEP equivalent scores for the “proficient” level, as defined by each state, was 60 points on NAEP 0-500 scales (1.5 times the size of the standard deviation of the NAEP grade 8 mathematics assessment)

**Application to NAEP:** Findings from this study can help states to examine the rigor of their academic standards compared to other states as well as against the NAEP standards.
2009 Preparedness Research: Longitudinal Analyses of Performance on NAEP Related to Performance in College and Other Outcomes of Florida Students:

**Purpose:** The purpose of this study was to relate 2009 grade 12 NAEP scores to ACT and SAT scores, college performance and other outcomes. Working with Florida state officials and their K-20 Education Data Warehouse (a longitudinal database) scores for students who had participated in the 2009 NAEP 12th-grade assessments and were subsequently enrolled in Florida’s public colleges in 2010 were linked to a variety of outcome indicators.

**Sample:** The overall NAEP sample size for 2009 Florida 12th grade was 3,400 (reading) and 3,200 (math). Sample size for students attending Florida public colleges in 2010 was 1,800 (math) and 1,900 (reading), or about 55% of the NAEP-sampled students. Approximately one-third of these students attended 4-year colleges and about two-thirds attended community colleges.

**Statistical method:** Average 2009 grade 12 NAEP scores (and interquartile ranges) were reported for seven variables related to postsecondary performance: SAT preparedness benchmarks; ACT preparedness benchmarks; Accuplacer performance; students’ self-reported program of study in high school; college enrollment; first year college coursetaking; and first year grade point average.

**Main findings:** Based on the College Board’s designation of 500 as the preparedness benchmark for each subject, 53% of Florida’s 12th graders were deemed college ready for mathematics and 54% were for critical reading. Based on the ACT benchmarks of 22 for mathematics and 21 for reading, 34% of Florida’s 12th graders were college-ready for mathematics and 46% were college-ready in critical reading. Finally, first year of college results showed a greater percentage of students achieving GPA of B- or better during their first year of college scored at or above the potential NAEP preparedness reference points from the NAEP-SAT linking study compared to students whose GPA was less than a B- during their first year of college. The limitations of the Florida data, namely the availability of data only for students enrolled in Florida public postsecondary institutions, must be taken into consideration when interpreting these results. The report can be found on the Governing Board website: ([link to Florida report](#)).

**Application to NAEP:** Findings from this study and others were used to report estimates of the percentage of students academically prepared for college in the 2013 and 2015 NAEP grade 12 report cards. Longitudinal research is ongoing and also includes a few additional state partners for 2013 NAEP.
2013 NAEP-High School Longitudinal Study (HSLS)

**Purpose:** HSLS is a longitudinal study conducted by NCES to follow a cohort of students who were in ninth grade during the 2009-2010 school year throughout their secondary years and into their postsecondary years. Data for students who had participated in both the 2013 NAEP 12th grade assessments and the HSLS were linked so that information from the HSLS student and parent questionnaires could provide a broader context for understanding NAEP results. In addition, the study explored using the relationship between the HSLS questionnaire variables and NAEP scores to predict NAEP mathematics scale scores for the full HSLS sample. The results from this research study are under review by NCES.

**Sample:** Students in the HSLS study who were also tested in NAEP in the 12th grade. N = 3,471 NAEP 2013 Math; 717 NAEP 2013 Reading.

**Statistical method to establish the link:** Imputation by multiple regression.

**Main findings:** The results from regression analyses and validation tests show that it is feasible to impute NAEP scale scores with acceptable accuracy for the full ~20,000 HSLS sample using data from the NAEP-HSLS overlap sample (N=3,471). Specifically, models that use HSLS algebra performance in grades 11 and 9 combined with student student-level covariates including race/ethnicity, gender, SD status, ELL status, and parental education proved to work best in recovering actual mean scores of student subgroups from the HSLS-NAEP overlap sample. The pseudo R-squared of the best fitting model with the least bias was 0.744 (R = .863).

**Application to NAEP:** There are multiple applications. For example, the study that investigated SES in the NAEP overlap sample and follow-on research resulting from this study (as well as additional similar efforts proposed for the NAEP-ECLS-K overlap sample of 2015) could inform the development of a simple and effective SES index based on student level SES items (existing one and/or newly piloted ones). Also possible with the HSLS is the derivation of preparedness benchmarks for college attendance and graduation (eventually).
2013 NAEP-EXPLORE (KY, NC, TN) and Longitudinal Analyses (NC, TN) – Grade 8

**Purpose:** The ACT Explore assessments were designed to assess a specific student’s academic progress at the 8th or 9th grade levels, especially with respect to college and career readiness. As part of the Governing Board’s research on using NAEP to estimate the percentage of students academically prepared for college, the NAEP-EXPLORE linking studies tried to identify reasonable points on the grade 8 NAEP reading and mathematics scales that indicate being on track for academic preparedness for college by the end of high school. Longitudinal analyses will follow this cohort of students in two states through high school and into the first year of postsecondary pursuits.

**Sample:**
- 3,700 and 3,800 for reading and math respectively in KY (including TUDA sample), and overall matching rates are 96% for both subjects.
- 4,000 and 3,900 for reading and math respectively in NC (including TUDA sample), and overall matching rates are 96% for both subjects.
- 2,700 each for reading and math in TN, and overall matching rates are 93% and 94% respectively.

**Statistical method:** Given that the correlation between NAEP and EXPLORE was not strong enough to support concordance, it was decided a statistical projection was a more appropriate choice. The correlations ranged from 0.72 to 0.74 for reading and from 0.81 to 0.82 for mathematics.

**Main findings:** In general, the relationship between NAEP and EXPLORE is moderate. Based on the Explore benchmarks of 16 for reading and 17 for mathematics, the NAEP Proficient achievement levels for reading and mathematics at grade 8 correspond well with the EXPLORE benchmarks and could possibly be used to form reasonable basis for reporting ‘on track for preparedness’. The reports can be found on the Governing Board website at (link to Explore reports). Longitudinal analyses are not yet available.

**Application to NAEP:** Results have not been applied to operational NAEP but could potentially be used to explore the feasibility of reporting estimates of the percentage of students on track to be academically prepared for college by the end of high school. The Governing Board has not decided whether to pursue a program of research to support this goal.
GLOSSARY

Depending on how the link is established (common items, common test takers, or randomly equivalent groups), how closely comparable the contents of the two tests are, and other considerations (e.g., the reliabilities of the compared tests or the correlation between them), one can use one of four linking procedures: equating, calibration, projection and moderation.

In **equating**, both tests, $X$ and $Y$, have been designed and developed to be equally reliable and each measures the same content. Equating is most often used when the goal is to relate two alternate forms of the same test, such as alternate forms of the ACT or the SAT. In equating the distributions of test $X$ and $Y$ are aligned or matched up directly. The matching can be done with equipercentile equating or linear equating, and the distributions can be either observed score distributions or estimates of unobserved true score distributions. Sometimes IRT scaling is applied and the resulting relationship is invariant across different populations.

In **calibration** (e.g., with item-response theory), two tests are assumed to measure the same content, but they are not equally reliable. For example, one test $X$ might be a long test whereas the other test $Y$ is short. The two versions of the test are not equated, but they are indirectly comparable because they have been calibrated to a common scale $\theta$. This type of linking is done across years in NAEP, TIMSS, PISA, PIRLS, most state criterion-referenced tests, as well as most nationally standardized norm-referenced tests. Calibration procedures provide unbiased estimates for individual students and means (average scores), but additional statistical machinery is needed to accurately estimate group characteristics such as the variance or the percent at and above achievement levels. In the 2011 NAEP/TIMSS linking study, calibration was accomplished by scaling in the same analysis the NAEP and TIMSS items that were administered within braided (one block NAEP paired with one block TIMSS) test booklets.

In **projection**, a regression equation uses the correlation between the two tests to predict the scores on one test $Y$ from those of another test $X$. There is no assumption that the two tests measure the same content or that they are equally reliable. However, there is an assumption that the tests are highly correlated. With projection, there is no longer a symmetric relationship between one test and the other. The conversion table for predicting the first test from the second is different from the table predicting the second test from the first. A statistical link was established between the NAEP and ECLS-K grade 8 reading scales using the marginal maximum likelihood (MML) composite regression procedure with the AM software (Cohen, 2005).

In **statistical moderation**, the scores on the first test $X$ are adjusted to have the same distributional characteristics as the scores on the second test $Y$. In this case it is assumed $X$ is linked to $Y$. This is typically done by matching the means and standard deviations of $X$ and $Y$, or matching their percentile ranks. The usual requirement for statistical moderation is that both $X$ and $Y$ have been administered to comparable populations of students (e.g., the student populations taking both tests are randomly equivalent). The State Mapping Study estimated the position of each state’s standards on a common scale by comparing the percentages of students in each NAEP school who achieved each of a state’s performance standards with the distribution of NAEP scores by the random sample of students in the school who took NAEP.

---

Evaluation of NAEP Achievement Levels

Background
Public Law 107-279 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._

Even after being in use for about 25 years and undergoing previous evaluations (1993, 1998, 2009), the achievement levels are still considered to be on a trial basis. Jack Buckley initiated a new evaluation during his tenure as NCES Commissioner to determine whether the trial status could be resolved.

About the Evaluation
The National Center for Education Evaluation and Regional Assistance (NCEE), part of the Institute for Education Sciences (IES), is administering the current evaluation of the NAEP achievement levels. On September 29, 2014, NCEE awarded a contract to The National Academy of Sciences to perform this work.

Objectives for the evaluation include the following:

- Determine how "reasonable, valid, reliable and informative to the public" will be operationalized in this study.
- Identify the kinds of objective data and research findings that will be examined.
- Review and analyze extant information related to the study's purpose.
- Gather other objective information from relevant experts and stakeholders, without creating burden for the public through new, large-scale data collection.
- Organize, summarize, and present the findings from the evaluation in a written report, including a summary that is accessible for nontechnical audiences, discussing the strengths/weaknesses and gaps in knowledge in relation to the evaluation criteria.
- Provide, prior to release of the study report, for an independent external review of that report for comprehensiveness, objectivity, and freedom from bias.
- Plan and conduct dissemination events to communicate the conclusions of the final report to different audiences of stakeholders.

Design
This study focuses on the achievement levels used in reporting NAEP results for the reading and mathematics assessments in grades 4, 8, and 12. Specifically, the study is reviewing
developments over the past decade in the ways achievement levels for NAEP are set and used and will evaluate whether the resulting achievement levels are "reasonable, valid, reliable, and informative to the public." The study relies on an independent committee of experts with a broad range of expertise related to assessment, statistics, social science, and education policy. The project receives oversight from the Board on Testing and Assessment (BOTA) and the Committee on National Statistics (CNSTAT) of the National Research Council.

Members of the interdisciplinary review committee were selected in early 2015 (see below):

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Christopher F. Edley, Jr. (Chair)</td>
<td>The Opportunity Institute</td>
</tr>
<tr>
<td>Dr. Peter Afflerbach</td>
<td>University of Maryland, College Park</td>
</tr>
<tr>
<td>Dr. Sybilla Beckmann</td>
<td>University of Georgia</td>
</tr>
<tr>
<td>Dr. H. Russell Bernard</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Dr. Karla Egan</td>
<td>EdMetric LLC</td>
</tr>
<tr>
<td>Dr. David J. Francis</td>
<td>University of Houston</td>
</tr>
<tr>
<td>Dr. Margaret E. Goertz</td>
<td>University of Pennsylvania</td>
</tr>
<tr>
<td>Dr. Laura Hamilton</td>
<td>The RAND Corporation</td>
</tr>
<tr>
<td>Dr. Brian W. Junker</td>
<td>Carnegie Mellon University</td>
</tr>
<tr>
<td>Dr. Suzanne Lane</td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>Ms. Sharon J. Lewis</td>
<td>Retired (formerly with the Council of the Great City Schools)</td>
</tr>
<tr>
<td>Dr. Bernard L. Madison</td>
<td>University of Arkansas</td>
</tr>
<tr>
<td>Dr. Scott Norton</td>
<td>Council of Chief State School Officers</td>
</tr>
<tr>
<td>Dr. Sharon Vaughn</td>
<td>The University of Texas at Austin</td>
</tr>
<tr>
<td>Dr. Lauress L. Wise</td>
<td>HumRRO</td>
</tr>
</tbody>
</table>

Additional information about the Committee and project activities is available at: [http://www8.nationalacademies.org/cp/projectview.aspx?key=49677](http://www8.nationalacademies.org/cp/projectview.aspx?key=49677). The first Committee meeting took place in Washington, DC on February 19-20, 2015. Governing Board staff attended the open session and made a presentation to the Committee on the history of the NAEP achievement levels setting activities. The second meeting of the Committee took place in Washington, DC on May 27-28, 2015. Governing Board staff attended the open session on the afternoon of May 27th to listen to panel discussions involving representatives of the media, state and local policymakers, advocacy organizations, and the Common Core State Standards assessment consortia, about interpretations and uses of NAEP achievement levels. Several additional meetings were conducted in the latter half of 2015 in closed session. The final report is expected to be released in mid-2016.

**Next steps**

The final report is expected to be available soon. NCES and Governing Board staff will be briefed on the findings, and we will also arrange a briefing for Board members. The briefing for
Board members will occur either via a webinar or during the August 2016 Board meeting, depending on the timing of when the report will be made available and disseminated to various stakeholder groups.

As stated in the NAEP legislation, the Commissioner of NCES will use the findings from the evaluation to decide whether the achievement levels should continue to be used on a “trial basis” or whether that designation can be removed. In addition, the final report may include conclusions and recommendations that have implications for future Governing Board achievement levels-setting activities. Public Law 107-279 also specifies that the Governing Board must prepare a formal response to the evaluation:

Not later than 90 days after an evaluation of the student achievement levels under section 303(e), the Assessment Board shall make a report to the Secretary, the Committee on Education and the Workforce of the House of Representatives, and the Committee on Health, Education, Labor, and Pensions of the Senate describing the steps the Assessment Board is taking to respond to each of the recommendations contained in such evaluation.

COSDAM will lead the process of responding to the evaluation and considering any potential implications for future achievement levels-setting work, with input from the full Board.
PARTICIPANT ENGAGEMENT IN NAEP:
CRITICAL REVIEW AND SYNTHESIS OF RESEARCH

BACKGROUND

In September 2015, AnLar Incorporated, along with its subcontractors, Abt Associates and Minds Incorporated, were awarded a contract by the Governing Board to conduct a systematic literature review documented via an annotated bibliography and synthesis summary, addressing what the field knows about the extent to which sub-optimal engagement may affect NAEP student performance and NAEP test administration.

The following provides an overview of progress on project milestones since the March 2016 quarterly Governing Board meeting. Updates detailed below include: the completion of operational coding, submission of the List of Relevant Sources and the Systematic Review Table, submission of the draft Annotated Bibliography and Technical review, and commencement of the meta-analysis of eligible studies and the draft Synthesis Report.

PROJECT MILESTONES

OPERATIONAL CODING

Operational coding of studies for Phases 1-3 concluded in March. All sources containing an abstract or full text were processed through Phase 1: Relevance (1,026 sources). Sources that remained eligible after Phase 1 were coded through Phase 2: Methodology, and sources that maintained the minimal level of rigorous methodology were coded through Phase 3: Full Coding (15 sources). All sources were duplicate-coded by two (2) research associates during each phase of review. The Principal Researcher, Dr. Joe Taylor, provided expert guidance and reconciled disagreements between the research associates. The 15 studies that remained eligible through Phase 3 were recorded into the List of Relevant Sources and Systematic Review Table. These studies also comprise the entries of the Annotated Bibliography.

The 15 studies included in the Annotated Bibliography were also processed through Phase 4: Comprehensive Critical Analysis review. During Phase 4 review, Dr. Taylor will code for critiques of methodology, findings, limitations, and recommendations. The details of this comprehensive analysis will be summarized in the Technical Review entries of the Annotated Bibliography and will be completed in May 2016.

LIST OF RELEVANT SOURCES

Upon completion of Phase 1-3 operational coding, AnLar sorted all sources into one of four categories:
• Phase 3 Eligible (NAEP-relevant): Contains sources that were coded all the way through Phase 3. It contains eight (8) correlational studies, three (3) intervention studies, and four (4) descriptive studies.

• Ineligible (Non-NAEP-relevant): Contains sources that were identified as relevant during Phase 1 coding, but are ineligible because they are not specific to NAEP (international assessments or other). These sources were coded through Phase 1.

• Ineligible Sources: Includes sources that were ineligible for a variety of reasons based on Phase 1 coding.

• Un-Coded: Contains sources that were identified by initial search strings, but for which researchers were unable to locate an abstract or full text. These sources were not coded during any phase of this project.

Phase 3 Eligible (NAEP-relevant) studies comprise the List of Relevant Sources, which was completed in March 2016. Each study in the list was also included as an entry in the Systematic Review Table and Annotated Bibliography. Additionally, Dr. Taylor will conduct statistical analyses across similar study types (i.e., correlational, intervention, or descriptive) to inform the findings, limitations, and recommendations sections of the Synthesis Report. These analyses will be completed in early May 2016.

SYSTEMATIC REVIEW TABLE

Concurrent to the completion of the List of Relevant Sources, AnLar entered corresponding data for the 15 eligible sources into a Systematic Review Table (SRT). The SRT contains a subset of pertinent codes for each eligible source that highlight the key illustrative data about each article, providing an accessible at-a-glance presentation. Categories in the SRT include: identifying information (e.g., reference, year published, source of study, and funding entity); descriptive characteristics (e.g., year(s) of data collection, sample size, participant grade(s), assessment type, assessment subject area, administration mode, motivation construct, and number of citations); and study characteristics (e.g., study type, nature of relationship between motivation and achievement on NAEP, direction of treatment effect on motivation, magnitude of relationship between motivation and achievement on NAEP, magnitude of treatment effect/effect size, p-value of relationship, statistical significance, met minimum criteria for either Osborn or WWC Frameworks, attrition, baseline equivalence, and alignment with research question(s)). The final SRT is complete and will be included in the final Synthesis Report.

ANNOTATED BIBLIOGRAPHY AND TECHNICAL REVIEW

AnLar drafted annotated bibliography entries for all 15 sources included in the List of Relevant Sources. Phase 4 review of the 15 studies is currently being conducted by Dr. Taylor. Research associates will use the critiques and data provided during the Phase 4 review to write technical review summaries for each study. Each technical review entry will provide data-specific information on primary findings, significance, limitations, and recommendations. The Annotated Bibliography and Technical Review will be finalized by May 2016.
SYNTHESIS REPORT

Throughout the Operational Coding phase, researchers identified a number of articles that provided relevant context or contributed to the public discourse on motivation and NAEP; however, for a variety of reasons, these articles were found to be ineligible for inclusion in the final List of Relevant Sources during Phase 1 or 2 reviews. Some reasons for exclusion include: focus only on international assessments (PISA, TIMSS, PIRLS) or other various assessments without comparative connection to NAEP; sources, such as technical or literature reviews, that did not include empirical research; or studies that used populations outside of the K-12 scope of research. While no longer eligible for inclusion in the Annotated Bibliography and Technical Review, researchers determined that a subset of these articles likely contained background and context to inform the Synthesis Report.

AnLar obtained citation counts for all sources (when citation counts were available) and calculated the mean and median number of citations, and identified the top five percent as the most cited sources. Researchers also reviewed additional Governing Board-sponsored articles that were not included in the potential source lists provided by NCES, literature search strings, or reference harvesting to account for sources influential to the Governing Board’s discussions prompting the work of this project. The two processes yielded 42 articles that were neither in the top five percent of most-cited studies, or directly relevant to the two research questions. Researchers then reviewed the abstract or full-text of these 42 sources to determine relevance to motivation and NAEP, in general. Ultimately, AnLar narrowed this list to seven (7) articles: three (3) are Governing Board-sponsored, and four (4) from the initial search strings. While these sources will not be coded, research associates will consider their content while writing the background, context, and recommendations sections of the Synthesis Report.

All study information captured in Phases 3 and 4 will be presented in a comprehensive report to summarize findings and overall conclusions most relevant to NAEP, while noting and explaining points of agreement and disagreement. Dr. Taylor will complete the meta-analysis of the 15 eligible sources by early May and researchers will incorporate this synthesis into the final report. Study information related to rigor (Phase 2) will be discussed in the report for the subset of ineligible studies selected for background context, as well as the 15 eligible studies included in Phase 4. This Synthesis Report will also present recommendations for future research. The report will be presented to COSDAM during the August 5, 2016 meeting.
2017 Writing Grade 4 Achievement Levels Setting Procurement

The 2017 NAEP writing assessment is the first administration of the grade 4 assessment under the current computer-based Writing Framework (https://www.nagb.org/publications/frameworks/writing/2017-writing-framework.html). Pursuant to the Governing Board’s legislative mandate, achievement levels must be set for the grade 4 writing assessment. In accordance with the Board policy on setting performance levels for NAEP, the achievement levels setting process includes achievement levels descriptions (ALDs), cut scores, and exemplar items. In 2012, the Board formally approved the updated achievement levels descriptions for writing at all three grade levels. A procurement is in process for a contractor to design and implement studies to recommend cut scores and exemplar items.

The 2017 grade 4 writing achievement levels setting will include a field trial (to test logistics associated with any software used to conduct the process), a pilot study, and an operational achievement levels setting study. In addition, the design procedures will require the collection of multiple sources of validity evidence. COSDAM will receive briefings and have the opportunity to provide input on the process throughout the life of the project, with Board action on the grade 4 writing achievement levels planned for the May 2018 Governing Board meeting.

On March 31, 2016, a Request for Proposals (RFP) was issued on www.fbo.gov: https://www.fbo.gov/index?s=opportunity&mode=form&id=40ccabce125cfdff6ca698e7b2c1e13&tab=core&cv=0. Proposals are due on May 26, 2016, with an anticipated award date of summer 2016. The contract period of performance is anticipated to be 24 months.

---

1 In 2011, NAEP writing assessments were administered at grades 8 and 12 under the current Writing Framework, and achievement levels were set for grades 8 and 12. The grade 4 assessment initially was planned for 2013 administration but was postponed to 2017 due to budgetary constraints.
# National Assessment Governing Board
## Reporting and Dissemination Committee

**May 13, 2016**  
10:00 am – 12:15 pm

**AGENDA**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Attachment</th>
</tr>
</thead>
</table>
| 10:00 – 10:15 am | **ACTION**: Release Plan for The Nation's Report Card: 2015 Science  
*Stephaan Harris, Public Affairs Specialist  
Laura LoGerfo, Assistant Director for Reporting and Analysis* | Attachment A |
| 10:15 – 10:45 am | Revisiting Board Reporting Policy and Guidelines  
*Laura LoGerfo* | Attachment B |
| 10:45 – 11:05 am | Review of Assessment Literacy Work  
*Stephaan Harris* | Attachment C |
| 11:05 am – 12:00 pm | Core Contextual Data: Development and Review Process  
*James Deaton, National Center for Education Statistics  
Jonas Bertling, ETS* | Attachment D |
| 12:00 – 12:15 pm | Information Items:  
- Communications Update  
- Progress on Procurements  
- Projected Schedule of NAEP Releases | Attachment E |
NATIONAL ASSESSMENT GOVERNING BOARD
RELEASE PLAN FOR THE
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP)

The Nation’s Report Card: 2015 Science

The 2015 National Assessment of Educational Progress (NAEP) Science Report Card will be released to the general public through an in-person event, scheduled for September or October 2016. Following a review and approval of the report’s results, the event will be arranged in Washington, DC or another major city in a venue that complements the subject matter.

The event, to be simultaneously webcast for a national audience, will involve the initial release of report results by the Acting Commissioner of the National Center for Education Statistics (NCES); moderation and comments by at least one Governing Board member; and comments from at least one expert in science education and assessment. The event, slated to be 60-90 minutes, will also include a conversational Q&A session that would include questions submitted via livestream. Full accompanying data will be posted on the Internet at the scheduled time of release.

The 2015 Science Report Card will present findings from a representative sample of about 115,400 4th-graders, 110,900 8th-graders, and 11,000 12th-graders nationwide. Results will be presented in terms of average scores, subscales in each content area (physical science, life science, and earth and space science), and NAEP achievement levels. Results for grades 4 and 8 will be available for the nation, 47 states and one jurisdiction (Department of Defense Schools); results for grade 12 will be for the nation only. Data will be presented for all students and by demographic and socioeconomic groups, such as race/ethnicity and gender. Contextual information (i.e., student and school survey data) with findings of interest will also be reported.

DATE AND LOCATION

The release event is scheduled to occur in September or October 2016. The release date will be determined by the Chair of the Reporting and Dissemination Committee, in accordance with Governing Board policy, following acceptance of the final report.
ACTIVITIES BEFORE RELEASE

In the weeks before the release event, the Governing Board will work to inform various audiences and stakeholder groups about the science assessment through a range of efforts that could include production and distribution of materials such as one-pagers, one-on-one meetings with partner organizations in the field, social media campaigns, and webinars.

In the days preceding the release, the Governing Board and NCES will offer a conference call for appropriate media as defined by the Governing Board’s Embargo Policy; and an embargoed data website available to U.S. Congressional staff, approved senior representatives of the National Governors Association and the Council of Chief State School Officers, and approved media. The goal of these activities is to provide these stakeholders with a comprehensive overview of findings and data to help ensure accurate reporting to the public and deeper understanding of results.

REPORT RELEASE

The Acting Commissioner of Education Statistics will publicly release the report at the NAEP website—http://nationsreportcard.gov—and at the scheduled time of the release event. An online copy of the report, along with data tools, questions, and other resources, will also be available at the time of release on the NAEP site. An interactive version of the release a Governing Board press release, the NAEP Science Framework, and related materials will be posted on the Board’s web site at www.nagb.org. The site will also feature links to social networking sites and audio and/or video material related to the event.

ACTIVITIES AFTER THE RELEASE

The Governing Board’s communications contractor will work with Board staff to coordinate additional post-release communications efforts—which could include such strategies as the production of infographics, online social media chats, and presentations—that would target communities and audiences with an interest in science as well as the general field of STEM (science, technology, engineering, and mathematics). The goal of these activities is to further extend the life of the results and provide value and relevance to stakeholders with an interest in student achievement and assessment in these areas.
Governing Board Guidelines for Releasing, Reporting, and Disseminating NAEP Results

Background
In August 2006, the Governing Board produced a Policy Statement on the Reporting, Release, and Dissemination of NAEP Results, which was accompanied by specific guidance on releasing NAEP results, entitled Guidelines for the Initial Release of The Nation’s Report Card. The Policy Statement delineates the responsibilities for the NAEP program held by the National Center for Education Statistics and by the National Assessment Governing Board. This statement also covers principles that drive the preparation, content, release, and dissemination of The Nation’s Report Card. The Guidelines for the Initial Release of The Nation’s Report Card outline the procedures for releasing NAEP data and the elements necessary for inclusion in an initial release of NAEP results.

At the March 2016 meeting of the Reporting and Dissemination (R&D) Committee, members requested that Board staff suggest revisions to the Policy Statement and Guidelines that would lead to an efficient and effective process for the reporting and dissemination of NAEP results and to eliminate outdated language in these documents which no longer bear relevance (e.g., references to print reports).

In reflecting upon this task, Board staff collaborated with NCES staff and suggest a different approach, hoping that there is an opportunity here and now to be broader and bolder. The R&D Committee members can take advantage of this moment in the Board’s work—developing a Strategic Plan to guide Board innovation and action for the next five years—and of this moment in the evolution of reporting. Since 2013, NCES has released NAEP reports only online, with each release improving on the format, structure, navigation, as well as breadth and depth of accessible content of the prior report. What is the next frontier?

Rather than present a revised version of the 2006 Guidelines and Policy Statement, staff recommend this session at the May 2016 R&D Committee meeting take a different and more innovative approach. The following questions should jumpstart a rich discussion:

- Currently, NCES includes an overwhelming amount of data on the Report Card website. What about highlighting certain findings and curating what graphics are presented?

- Currently, all of the NAEP data, visual depictions of the data, and data for secondary analysis in online data tools are released at the same time. This exemplifies transparency in reporting but also results in limited traffic to the report card site after the release. What about a more flexible release? For example, releasing some data on one day and releasing other data subsequently? Or perhaps following a release similar to current practice with a subsequent release to include other data or deeper analysis?
• Currently, journalists tell us that they do not know when to anticipate a NAEP release. At the September 2015 media roundtable, participants requested a schedule of releases so they could request in advance NAEP-dedicated space in their newspapers or on their sites. What about making the schedule of release more predictable? This would be similar to how the Bureau of Labor Statistics releases certain data on predictable dates, facilitating media coverage.

• Currently, NAEP results are presented by type: overall scores, subgroup results, trend data, etc. What about organizing the report by type of questions stakeholders and target audience members are seeking? This might include a section for national media who need overall results, a centralized report for TUDA data so district personnel can compare their progress with their peer districts, a resource for states to compare their progress and learn from others’ progress, a component of the data designed for those who wish to explore the data on their own, and a site for leaders to learn to what subgroups attention should be drawn, etc.

• Currently, online NAEP Report Cards are accessed by specific assessment subject and year. What about organizing NAEP data by topic area, providing diverse avenues to view the data and deepening levels of complexity within a given subject? Such an approach to draw in extra data would occur after an initial release date but become a handy, centralized resource for stakeholders. For example, stakeholders interested in STEM could view infographics from the science, math, and TEL assessments, use interactive tools to explore data from each of these assessments further, and for serious analysts, analyze data directly through a user-friendly interface. Note: caveats warning against drawing inappropriate cross-subject comparisons would be required.

• Currently, NAEP reporting focuses only on NAEP data. What about considering other data sources alongside NAEP data, such as international data? Not links per se, but not isolating NAEP in reporting.

• Currently, the familiar look to each release site expedites navigation through the report card, and as such changes to the interface may require viewers to re-learn the website in its entirety. What about discussing what level and type of improvement justify changing the report site with new navigation and presentation?
Review of Assessment Literacy Work

At its last several meetings, the Reporting and Dissemination Committee (R&D) has discussed various aspects of assessment literacy—informing audiences about the National Assessment of Educational Progress (NAEP) and its unique uses and features in context of other assessments in the testing and education landscape. Because the Committee advises Governing Board staff on outreach and dissemination efforts for NAEP, members have discussed possible effective means to promote assessment literacy through a variety of communications strategies, such as material production and website pages.

R&D Chair Rebecca Gagnon requested that the Board’s communications contractor, the District Communications Group (DCG), perform a survey of major assessment literacy campaigns of other groups and entities to gain a better understanding of ongoing national efforts and which audiences those are targeting. A highlight of the findings, including a chart featuring results by organization, types of materials, messages, target audiences, and connections to NAEP, are below.

Assessment Literacy Landscape Audit

Summary

- DCG reviewed 35 organizations, including assessment consortia, national education organizations, universities, local and state education agencies, and the private sector.
- The materials DCG found ranged from academic research and policy reports to infographics and a video series.
- Assessment literacy is an active and ongoing conversation. Many materials DCG found were published within the last year.
- Teachers are by far the most common target audience for materials about assessment literacy, followed by parents and researchers.
- Common messages include distinguishing between different types and uses of assessments (especially formative vs. summative), the over-testing burden and limitations of high-stakes testing, and the importance of improving assessment literacy among teachers in an assessment-driven education landscape.
- NAEP does not feature in the vast majority of the existing assessment literacy materials, though the Governing Board has relationships with many of the organizations that publish materials.
<table>
<thead>
<tr>
<th>Organization</th>
<th>Types of Materials</th>
<th>Messages</th>
<th>Target Audience</th>
<th>Mention of/Connections to NAEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Institutes for Research</td>
<td>Website, project reports</td>
<td>Innovating assessment methods; state/district/local assessments</td>
<td>State assessment officials, teachers</td>
<td>No</td>
</tr>
<tr>
<td>American Intercontinental University</td>
<td>Blog</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>American Psychological Association</td>
<td>Online brochure/website</td>
<td>Types and uses of tests; appropriate use of tests; limitations of high-stakes testing approaches; call for more research</td>
<td>Researchers</td>
<td>No</td>
</tr>
<tr>
<td>Association for Middle Level Education</td>
<td>Website, printable article</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td>Education students/future teachers</td>
<td>No</td>
</tr>
<tr>
<td>(formerly National Middle School Association)</td>
<td></td>
<td>The long-term importance of assessment literacy itself, especially among teachers; teacher training/Instructional; assessment methodology;</td>
<td>Teachers, researchers</td>
<td>No mention, but Jim Popham published an article in their journal.</td>
</tr>
<tr>
<td>Association for Supervision and Curriculum</td>
<td>Article</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buros Center for Testing at the University of Nebraska–Lincoln</td>
<td>Website, videos, glossaries, conferences, webinars, academic articles, standards</td>
<td>Detailed reference and critical texts on existing tests</td>
<td>Test administrators, researchers, teachers</td>
<td>No</td>
</tr>
<tr>
<td>California Digital Chalkboard</td>
<td>Online instructional modules</td>
<td>Types and uses of tests, pro-Common Core</td>
<td>Teachers</td>
<td>No</td>
</tr>
<tr>
<td>Center for American Progress</td>
<td>Report (34 pages)</td>
<td>Over testing (especially at district level); pro-Common Core</td>
<td>Policymakers</td>
<td>No</td>
</tr>
<tr>
<td>Center on Enhancing Early Learning Outcomes</td>
<td>Report (24 pages)</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td>Policymakers</td>
<td>No</td>
</tr>
<tr>
<td>Council of the Great City Schools</td>
<td>Report (164 pages)</td>
<td>Test burden/over testing; appropriate uses of tests</td>
<td>Policymakers</td>
<td>Yes (References NAEP as an independent reference point of student progress; emphasizes NAEP is not a testing burden as time required to take it is &quot;negligible.&quot;; and declares NAEP is reflective of the public school population.)</td>
</tr>
<tr>
<td>Data Quality Campaign</td>
<td>Webinar</td>
<td>Differences between data literacy and assessment literacy; teacher training/Instructional</td>
<td>Teachers</td>
<td>No</td>
</tr>
<tr>
<td>Educators Technology</td>
<td>Infographic</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td>Parents, teachers</td>
<td>No</td>
</tr>
<tr>
<td>Edudemic</td>
<td>Article</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td>Teachers</td>
<td>No</td>
</tr>
<tr>
<td>Organization</td>
<td>Types of Materials</td>
<td>Messages</td>
<td>Target Audience</td>
<td>Mention of/Connections to NAEP</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------</td>
<td>----------</td>
<td>----------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>ETS (Educational Testing Service)</td>
<td>Report (18 pages), website</td>
<td>Pro-assessment; designing assessment methodology; promoting their assessment model</td>
<td>Teachers</td>
<td>Not in most materials, but the site describes how ETS contracts with NCES to design NAEP questions and a few items of NAEP-based research.</td>
</tr>
<tr>
<td>Fair Test</td>
<td>Website, fact sheet</td>
<td>Anti-standardized testing; limitations of high-stakes testing approaches</td>
<td>Parents</td>
<td>No</td>
</tr>
<tr>
<td>Future Forward Colorado</td>
<td>Infographic</td>
<td>Components of a &quot;good&quot; assessment</td>
<td>Parents</td>
<td>No</td>
</tr>
<tr>
<td>Harvard Education Publishing Group</td>
<td>Blog</td>
<td>The long-term importance of assessment literacy itself</td>
<td>Researchers, education students/future teachers</td>
<td>No mention, but Jim Popham published on this blog.</td>
</tr>
<tr>
<td>Illinois State Board of Education</td>
<td>Frequently Asked Questions</td>
<td>Explaining PARCC; benefits of assessments; facts about a specific type of test</td>
<td>Parents</td>
<td>No</td>
</tr>
<tr>
<td>Kentucky Department of Education</td>
<td>Presentation</td>
<td>Teacher training/instructional: incorporating assessments into practice, explaining the role of assessments to others</td>
<td>Teachers</td>
<td>No</td>
</tr>
<tr>
<td>McGraw Hill Education</td>
<td>Infographic</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;),</td>
<td>Parents, consumers, teachers</td>
<td>No</td>
</tr>
<tr>
<td>Measured Progress</td>
<td>Website, Assessment Insights Newsletter, blog, webinars</td>
<td>Promoting their assessment model; teacher training/instructional</td>
<td>State assessment officials, teachers, researchers</td>
<td>No mention, but in disclosures, it mentions a previous contract with the Governing Board.</td>
</tr>
<tr>
<td>Michigan Assessment Consortia</td>
<td>Report (20 pages), audience-specific guides</td>
<td>The long-term importance of assessment literacy itself, creating common assessment literacy standards for education stakeholders</td>
<td>Students, parents, teachers, administrators, district officials, state policymakers</td>
<td>No</td>
</tr>
<tr>
<td>Monroe County Intermediate School District</td>
<td>Website</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;)</td>
<td>Parents</td>
<td>No</td>
</tr>
<tr>
<td>National Center for the Improvement of Educational Assessment</td>
<td>Events, lectures, research, maps</td>
<td>Assessment methodology</td>
<td>National and state assessment administrators and agencies; researchers; test developers</td>
<td>No</td>
</tr>
<tr>
<td>National Conference on Student Assessment, hosted by the Council of Chief State School Officers</td>
<td>Event</td>
<td>Equitable assessments and closing the achievement gap (2016 theme)</td>
<td>State and local education agencies, universities, test developers (from their website)</td>
<td>No mention, but the Governing Board staff has presented at their conference previously.</td>
</tr>
<tr>
<td>Organization</td>
<td>Types of Materials</td>
<td>Messages</td>
<td>Target Audience</td>
<td>Mention of/Connections to NAEP</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>National Middle School Association</td>
<td></td>
<td>(&quot;Formative/Summative&quot;), pro-assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National PTA</td>
<td>Web articles, guide to assessments in Maryland (6 pages)</td>
<td>Limitations of high-stakes testing approaches; types and uses of tests; enhancing student performance on tests; relationship with Common Core; benefits of Common Core assessments; staying involved</td>
<td>Parents</td>
<td>No</td>
</tr>
<tr>
<td>Northern Ohio Research and Training Technology Hub</td>
<td>Five-part video series and slide show</td>
<td>Teacher training/Instructional; pairing assessments with instruction</td>
<td>Teachers</td>
<td>No</td>
</tr>
<tr>
<td>Northwest Evaluation Association and AssessmentLiteracy.org</td>
<td>Blogs, infographic, &quot;Make Assessments Matter&quot; reports (40 pages) and survey</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;); anti-state testing; anti-summative testing; pro-formative assessments; &quot;For every student, multiple measures&quot;</td>
<td>Parents, teachers, administrators</td>
<td>Not in most materials, but in passing on AssessmentLiteracy.org, which incorrectly suggests NAEP is a &quot;high stakes&quot; summative test.</td>
</tr>
<tr>
<td>Pearson/Assessment Training Institute</td>
<td>Articles, posters, fact sheets, DVDs, white papers, book chapters</td>
<td>Empowering educators, &quot;Assessments for learning,&quot; pro-assessment in classrooms; improving achievement through assessment</td>
<td>Teachers primarily, parents</td>
<td>No</td>
</tr>
<tr>
<td>Smarter Balance</td>
<td>Website, webinars, Frequently Asked Questions, fact sheets</td>
<td>Pro-Common Core, types and uses of tests (&quot;Formative/Summative&quot;), computer-based testing,</td>
<td>Test administrators, parents</td>
<td>No</td>
</tr>
<tr>
<td>University of Montana</td>
<td>Dissertation</td>
<td>Low level of teacher and principal assessment literacy after a survey</td>
<td>Researchers</td>
<td>No</td>
</tr>
<tr>
<td>University of North Carolina School of Education</td>
<td>Article</td>
<td>Types and uses of tests (&quot;Formative/Summative&quot;),</td>
<td>Researchers, teachers, education students/future teachers</td>
<td>No</td>
</tr>
<tr>
<td>University of Texas at Austin, Learning Sciences</td>
<td>Website</td>
<td>Teacher training/instructional; types and uses of tests (&quot;Formative/Summative,&quot; (high-stakes/low-stakes))</td>
<td>Researchers, education students/future teachers</td>
<td>No</td>
</tr>
</tbody>
</table>
Core Contextual Questionnaires: Development and Review Process

NCES has developed new core contextual questions for the 2017 operational administration coinciding with NAEP’s transition to digitally based assessments. These include the following five modules: (1) socio-economic status; (2) technology use; (3) school climate; (4) grit; and (5) desire for learning.

During the Reporting & Dissemination (R&D) committee meeting at the May 2016 board meeting, NCES will briefly review the development and review process, which allows for input from R&D at three stages: (1) prior to cognitive lab testing; (2) prior to pilot testing; and (3) prior to operational. The Committee’s first review of these new questions occurred at the August 2014 board meeting, prior to the cognitive labs. The second review occurred during the May 2015 board meeting, prior to pilot testing. The final Committee review is scheduled for June 2016 in preparation for the 2017 operational assessments.

At the May 2016 Board meeting, NCES will present high-level findings from the 2016 pilot of the new contextual modules with a specific focus on findings for the piloted student questionnaire indices. This will include a summary of lessons learned from frequency data, factor analyses, and timing data.

The table below represents a timeline for R&D’s review of core contextual modules for 2017 NAEP.

R&D reviews and activities: 2017 Core Item Development

<table>
<thead>
<tr>
<th>STAGES</th>
<th>DATES</th>
<th>TASKS</th>
<th>COMPLETE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITEM DEVELOPMENT &amp; PRE-TESTING</td>
<td>08/2014</td>
<td>R&amp;D review of existing item pool and draft items</td>
<td>✔️</td>
</tr>
<tr>
<td>PILOT</td>
<td>05/2015</td>
<td>R&amp;D clearance review for pilot</td>
<td>✔️</td>
</tr>
<tr>
<td></td>
<td>05/2016</td>
<td>Presentation of main pilot findings to R&amp;D</td>
<td></td>
</tr>
<tr>
<td>OPERATIONAL</td>
<td>06/2016</td>
<td>R&amp;D clearance review for operational (combined with focused review of additional questions proposed for piloting in 2017 in response to R&amp;D’s comments during 05/2015 review)</td>
<td></td>
</tr>
</tbody>
</table>


Upcoming NAEP Reports as of April 2016

### Initial NAEP Releases

<table>
<thead>
<tr>
<th>Report</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015 Grade 12 Mathematics and Reading National</td>
<td>April 2016</td>
</tr>
</tbody>
</table>

### Other NAEP Reports

<table>
<thead>
<tr>
<th>Report</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on NAEP: Sampling</td>
<td>May 2016</td>
</tr>
<tr>
<td>Focus on NAEP: Simpsons Paradox</td>
<td>June 2016</td>
</tr>
<tr>
<td>Focus on NAEP 12th Grade Participation &amp; Engagement</td>
<td>July 2016</td>
</tr>
</tbody>
</table>
Equity, Evidence and Innovation in Science, Technology, Engineering, and Mathematics (STEM) Education

Ramón Barthelemy

Ramón Barthelemy is a policy fellow at the U.S. Department of Education and a former Fulbright Scholar in Finland. He has studied issues of equity and access in STEM with a focus on women and LGBT people. Currently, he works on K12 and higher education policy in the Department’s STEM Office.

Ramón holds a bachelor’s degree in Astrophysics from Michigan State University and a masters and Ph.D. in Science Education from Western Michigan University (WMU) where he received a fellowship awarded by the National Science Foundation’s Alliances for Graduate Education and the Professoriate (AGEP) program. He is also a recipient of the Michigan Space Grant. AGEP is committed to the national goal of increasing the numbers of underrepresented minorities, including those with disabilities, entering and completing STEM graduate education and postdoctoral training. Ramón is the founder and first president of WMU’s oSTEM chapter (out in Science, Technology, Engineering, and Mathematics).

Melissa Moritz

Melissa Moritz serves as the Deputy Director of STEM at the U.S. Department of Education (ED). In this capacity, she supports STEM policy and programs at ED that focus on STEM teaching and learning, from preschool to workforce. She serves on numerous interagency working groups and co-chairs the P-12 STEM working group as part of the White House Committee on STEM Education (CoSTEM).

Prior to joining ED, she served as the Vice President of Science, Technology, Engineering and Math (STEM) and Education Initiatives at Teach for America (TFA). In that capacity, she oversaw TFA’s national STEM Initiative and managed the team that led TFA’s Early Childhood Education Initiative, Diverse Learners Initiative, Military Veterans Initiative and Native Alliance Initiative Initiative. As part of the STEM Initiative, Melissa created TFA’s first computer science cohort and raised nearly $10M to support the recruitment and training of new STEM educators.

After graduating from the Massachusetts Institute of Technology with a B.S. in Biology in 2006, she joined TFA, where taught middle school science at MS 321 in New York City. Melissa was named one of the “100 Women Leaders in STEM” in 2012 and previously sat on STEMConnector’s Innovation Task Force and the US News STEM Advisory Council.
STEM Office: Vision, Mission and Strategies

Vision:

STEM\(^1\) learning is important for everyone. The relevant, real-life skills that people develop when learning STEM subjects help make everyone better problem-solvers and citizens. To achieve the vision of **STEM literacy for all**, the Office of STEM at the U.S. Department of Education seeks to:

- Maximize access to high-quality STEM education for all students, from Pre-K through post-secondary students, both in and outside the classroom.
- Inspire and prepare students to achieve proficiency in the STEM disciplines and to consider pursuing careers in STEM fields, particularly people of color, females, and special needs populations.
- Support educators who teach STEM subjects to ensure they have access to the tools and resources they need to prepare students with the STEM skills needed for college, career and life.
- Identify and support the implementation of innovative and scalable approaches and research strategies that improve the effectiveness of STEM education in formal and informal learning environments.

Mission:

We seek to improve access to quality STEM education for all students, particularly students from groups that have historically been underserved in the STEM fields, including students in low income communities, students of color, females, students with special educational needs, and students living in rural communities. To accomplish this we will focus on the following **seven** priority areas:

1. Improve the P–20 experience for all students, especially underserved students.
2. Enhance access to high quality out-of-school and informal STEM learning experiences that build upon and complement formal, classroom-based learning experiences.
3. Support teachers who teach STEM subjects (with an emphasis on expanding the scope of P–20 STEM to include Pre-K and computer science).

---

\(^1\) Definitions for which disciplines should be considered part of ‘STEM’ (Science, Technology, Engineering and Mathematics) vary considerably, but for the purposes of this document and the Department of Education’s STEM work, our primary focus is on grades P-12 for which STEM primarily consists of math and science plus the emerging fields of computer science, engineering and technology. Technology can also mean many things, in our context we are focused on supporting students to utilize technology to build and create technology as well as supporting educators to use technology as a tool for learning. In post-secondary education, STEM is defined to encompass majors, certifications and coursework that contribute to learning in these disciplines. STEM learning takes place in many settings and STEM skills such as critical thinking, problem solving, experimentation, data analysis, argumentation from evidence and observation are foundational for all students regardless of intended major or career.
4) Collaborate across multiple sectors, particularly innovative media, to increase awareness of, and interest in STEM disciplines and careers and connect STEM to real-life.
5) Increase students’ access to community-based resources (e.g., link the Department’s grantees to initiatives such as My Brother’s Keeper, STEM Learning Ecosystems) by identifying and connecting to STEM-focused initiatives with similar or complementary goals.
6) Bring together research communities focused on formal and informal STEM learning to identify effective tools, strategies and programs that can be used in new and innovative ways to enhance student interest, motivation and learning.
7) Identify knowledge gaps and work to fill those gaps through innovative research practices, thus expanding the evidence base for promising practices in STEM education.

**Strategies:**

To impact the above priority areas, we employ the following strategies:

- **Strengthen existing Department of Education STEM programs:** Support Math and Science Partnerships, 21st Century Community Learning Centers, School Improvement Grants (SIG), Teacher Quality Partnerships, Investing in Innovation (i3), Ready to Learn (RTL) and many STEM-focused programs and their grantees. Collaborate across the Department to effectively integrate STEM as a priority in federal programs and support grantees’ successful implementation of STEM-related projects.

- **Enhance inter-agency collaboration focused on STEM:** Foster stronger linkages across agencies that have STEM education programming. Collaborate with other agencies to identify synergistic activities that elevate awareness of, interest in and proficiency in the STEM fields.

- **Communications and Outreach:** Use convenings, events, speeches, and other mechanisms to highlight models, interventions, data, leading practices and policies for formal and informal STEM learning at the federal, state and local level and encourage broad adoption. Leverage senior leadership at the Department and across agencies to amplify key STEM messages.

- **External Partnerships:** Partner with non-government strategic partners (e.g., media, non-profits, funders, state STEM coalitions) to support these priorities. Leverage unique assets and capabilities to improve access, equity, and student engagement in STEM.

- **Influence and Shape the Future of STEM Education:** Identify and help cultivate, disseminate and encourage adoption of innovative, promising, and evidence-based practices. Catalyze research, development and innovation in STEM education to help answer such questions as how to cultivate and leverage connections between formal and informal education and how best to utilize technology to support students and teachers. Promote alternative approaches to innovation in research and development in education technology and help coordinate efforts across government agencies and private foundations (e.g., the Department’s proposed ARPA–ED initiative).

**Key focus areas and messaging:**

---

- **Equity** – To improve education in this country we need to make sure that no matter where children live or what school they go to, they have an equal opportunity to access quality learning environments. This includes making sure all schools have teachers and programs that can teach students science, technology, engineering and math—or what we call “STEM”.

- **STEM proficiency for all students** – We must ensure that all students have the knowledge and skills they will need in order to thrive in the 21st century workplace and world. This starts with a strong foundation gained from early STEM experiences, both during the school day and during out-of-school time, and is sustained and supported throughout students’ educational careers.

- **STEM support for all teachers** – All children deserve excellent teachers in STEM subjects. We must prepare and support educators to ensure they have the tools and resources they need to inspire, cultivate and steward students’ STEM learning.

- **Evidence-based practice** – Successfully implementing improvements in STEM education requires identifying and scaling innovative practices and technologies that provide evidence-based improvement to education. We must encourage public and private research funding agents to identify these innovations and provide the evidence-based required for their adoption.

**Emerging areas of opportunity:**

- **Early Learning** – Current research indicates that young children have the capacity for constructing conceptual learning and the ability to use the practices of reasoning and inquiry. Learning science and engineering practices in the preschool years foster children’s curiosity and enjoyment in exploring the world and lay the foundation for lifelong science learning both in and outside of P–12 settings and throughout their entire lives.

- **Computer science** – Computer science (CS) coursework (including applications of CS like cybersecurity & robotics) provides access to foundational problem-solving skills of benefit to all children. Despite the opportunities involving CS skills, less than one-quarter of students nationwide have access to rigorous computer science courses. We need to ensure all students have equitable access to these courses and experiences.

- **Synergies between formal and informal STEM** – Increasingly, effective and enriching STEM opportunities are happening outside the classroom. While the impact of experiential learning is well documented, we need to develop stronger and more extensive connections between the formal and informal learning communities. As noted in a recent National Research Council report, “The ways in which young people learn about STEM has fundamentally changed in the past decade. More so than ever, young people now have opportunities to learn STEM in a wide variety of settings, including clubs, summer programs, museums, parks, and online activities.”

- **STEM Learning Ecosystems** – The concept of a “STEM Learning Ecosystem” has recently emerged as a promising approach both for increasing overall interest and engagement in STEM within a community as well as for addressing disparities in access to quality STEM learning opportunities. A STEM Learning Ecosystem is a learner-

---

3 http://www.prweb.com/releases/2012/12/prweb10219767.htm
centric model that leverages community assets across multiple settings that together constitute a rich array of learning opportunities for young people. Such settings include schools, community organizations such as libraries, after-school and summer programs, STEM-rich institutions such as science centers and museums, as well as informal experiences at home. A learning ecosystem harnesses the unique contributions of all these different settings, providing multiple and varied opportunities for STEM learning to all children so that they may become engaged, knowledgeable and skilled in the STEM disciplines.

- **Innovations in television and media** – Promoting lifelong learning in STEM involves leveraging a variety of media approaches. Working with the White House and various media outlets, the STEM Office has the opportunity to infuse more STEM-focused content into traditional media platforms such as television and educational games, while promoting the increased use of STEM programming by other types of media commonly used by students (e.g., social media, comics, transmedia). The STEM Office will continue to promote positive portrayals of STEM careers and disciplines that include equity in race, gender, and socio-economic status.
National Assessment Governing Board’s
INNOVATION AMBITION

STRATEGIC PLAN

2016-2020

DISCUSSION DRAFT

May 4, 2016
Overview

Our Mission
The mission of the independent, bipartisan National Assessment Governing Board is to set policy for the National Assessment of Educational Progress (NAEP). Among the responsibilities specified in its authorizing statute, the Governing Board must identify the subjects to be tested by NAEP, determine the content for each assessment, review all NAEP questions, set achievement levels, and inform Congress and the American public about the achievement of U.S. students. To fulfill its Congressional mandate, the Governing Board must also “take appropriate actions needed to improve the form, content, use, and reporting of results of any assessment authorized”.¹

Purpose of the Strategic Planning Initiative
The purpose of the National Assessment Governing Board’s Strategic Planning Initiative is to take stock of the value and contributions of NAEP to our nation, identify opportunities to advance the Governing Board’s statutory mandate, understand and address any challenges to this mission posed by changes in the external environment, and ensure that the Governing Board continues to play an important role in informing policymakers, educators, and the public about student achievement in our nation. The Governing Board’s Strategic Plan aims to be consistent and coordinated with the priorities of the National Center for Education Statistics (NCES) to further the overall mission and objectives of NAEP. The Strategic Plan affirms the long-standing principles of NAEP’s curriculum independence, its status as a low stakes assessment for national, state-level, and select urban district benchmarking comparisons and analysis, and its prohibition on reporting individual student and school results, in accordance with the NAEP statute.

Vision
This Strategic Plan serves as the “North Star” for the National Assessment Governing Board’s innovation ambition through the year 2020. The Strategic Plan is guided by the values of parsimony, feasibility, and measureable impact that make a difference in educational progress. When implemented, the Strategic Plan will ensure that the Governing Board continues to play an important role in informing policymakers, educators, and the public about the educational progress of our nation.

Process
The Governing Board embarked on a three-phase, six-year process to develop and implement its Strategic Plan for NAEP, beginning in November 2014. In the first year, Phase I, the Governing Board articulated the vision for its Strategic Plan through the Strategic Planning Framework. The Framework included overarching goals and priorities and was approved by the Board on August

¹ Pub. L. 107-279, §302(e)(1)(l)
8, 2015. The second year, Phase II of the Strategic Planning Initiative, culminated in the approval of this Strategic Plan on [fill in date TBD]. The development of the Strategic Plan entailed numerous Board deliberations and consideration of external feedback from stakeholder groups which resulted in refinement of the priorities identified in the Framework document, referred to as Goals in this document. Finally, Phase III of the Initiative is to implement the plan, from its approval through the year 2020. The progress and impact of these initiatives will be captured in annual progress reports and a final report to summarize the successes of the Strategic Plan.

**Strategic Plan Goals**
The Governing Board identified the following Goals to guide its work through the year 2020:

1. **Improve Understanding and Use of NAEP Resources**
2. **Strengthen Partnerships to Inform and Promote NAEP Resources**
3. **Make Strategic Decisions to Increase the Value and Impact of NAEP**
4. **Innovate to Keep NAEP at the Forefront of Measuring Student Achievement**

These four Goals provide the overarching direction for the Governing Board’s work. The following pages detail specific Strategies and activities the Governing Board will undertake to achieve these goals. Each Goal and Strategy includes exemplary Actions and Indicators to illuminate the likely activities that the Board will conduct to achieve the desired outcomes. Some of the Actions identified in this Strategic Plan build on existing initiatives already underway; others are new (indicated with an *). However, in its implementation of the Strategic Plan, the Board is not constrained by the items listed in this document. Similarly the proposed Timelines for the exemplar Actions are general guidelines, not deadlines, for the work. The Actions (and accompanying Indicators and Timelines) may be amended during implementation of the Strategic Plan, to seize upon new opportunities or address changes in the educational and assessment landscape.

**Stakeholders**
It is the vision of the Governing Board to focus its efforts on activities that will benefit the stakeholders of NAEP. The primary audience is the general public, but also includes plans to reach policymakers, researchers, educators, and parents. Individual activities may target specific stakeholder groups; yet in total the Governing Board’s implementation of its Strategic Plan will positively impact all of these stakeholders.

**Implementation of the Goals**
The Governing Board will implement the Strategic Plan over approximately four years, from its approval in 2016 through 2020. The following pages outline the strategies and activities the Governing Board will launch to achieve the four Strategic Plan Goals.
The initiatives identified in the Strategic Plan will be conducted primarily by Governing Board staff and its contractors and overseen by the Board’s Standing Committees: Assessment and Development Committee (ADC), Committee on Standards, Design and Methodology (COSDAM), Executive Committee, and Reporting and Dissemination (R&D) Committee. Each planned action detailed below includes the assigned oversight Committee, indicators for measuring progress, and anticipated timeline for completion. The Executive Committee will provide leadership to the Board regarding the course of those activities and will monitor the Strategic Plan’s implementation.
Goal 1: Improve Understanding and Use of NAEP Resources

Strategy A – Advance New Reporting Strategies

Emphasize continuous (rather than episodic) reporting strategies that encourage greater use of NAEP resources.

**Actions**

1. Use diverse outreach approaches, including social media, to increase the reach of the Governing Board’s Communications Plan implementation.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Communications Plan metrics</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

2. Create communications products (including infographics) to promote greater awareness and use of NAEP resources beyond what is traditionally included in initial releases (including spotlighting contextual variables, student subgroup performance, released test questions, and performance of rural regions).

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Materials created</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

3. Host a series of seminar/webinar events to highlight secondary uses of NAEP resources that inform research/policy/practice following Report Card releases.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Events hosted Event attendance</td>
<td>Duration of plan</td>
</tr>
<tr>
<td>COSDAM</td>
<td>All</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Expand outreach to education stakeholders who are less likely to be aware of NAEP (e.g. teachers, principals, and district administrators) by identifying their information needs and using those insights to customize communications.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Information gathered Materials created</td>
<td>Duration of plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COSDAM
Goal 1: Improve Understanding and Use of NAEP Resources

Strategy B – Increase Understanding of Appropriate Uses of NAEP Information

Develop and promote materials to increase stakeholders’ understanding of valid uses of NAEP, thereby reducing inappropriate uses of NAEP and spotlighting good uses of the information. Promote these materials through the reporting strategies identified in Goal 1.A and tailor them for specific audiences as needed.

**Actions**

1. Develop case studies/testimonials showcasing the value of NAEP as a resource for educational improvements (such as participating districts’ use of Trial Urban District Assessment data).*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Materials created</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

2. Working in partnership with NCES, define the desired claims that NAEP will be used to support a validity framework.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSDAM</td>
<td>Policymakers Researchers</td>
<td>List of desired claims</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

3. Synthesize secondary uses of NAEP information to identify the most common uses of NAEP and evaluate the extent to which these uses are appropriate or desirable to inform content needs for target audiences.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSDAM</td>
<td>Researchers Policymakers Media</td>
<td>Synthesis completed</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

4. Develop communications materials that explain what NAEP is within the context of high-quality assessments generally, how it can be used, and address common misuses/misconceptions.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D</td>
<td>All</td>
<td>Communications Plan metrics</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

5. Promote the use of NAEP by increasing awareness and understanding of the relationship between NAEP and other assessments (e.g. international assessments).*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSDAM</td>
<td>All</td>
<td>Communications Plan metrics</td>
<td>Duration of Plan</td>
</tr>
</tbody>
</table>

*Indicates a new Activity for the Governing Board.
Goal 2: Strengthen Partnerships to Inform and Promote NAEP Resources

**Strategy A – Leverage Partnerships to Promote NAEP Resources to Stakeholders**

Identify ways to communicate more effectively to stakeholder groups to increase their awareness and use of NAEP resources.

**Actions**

1. Strengthen partnerships and leverage those relationships to provide the Governing Board with input on stakeholder information needs and to expand the reach of NAEP communications.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>Co-hosted events, Meetings with partners</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

2. Tailor communication products to individual stakeholder groups, to be distributed via the reporting strategies in Goal 1.A and through Governing Board members’ networks.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>Communications Plan metrics</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

3. Increase the number of NAEP presentations at education events hosted by partner organizations to promote NAEP resources and extend the coverage of NAEP releases.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>Staff presentations at conferences, Board member presentations at conferences</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

*Indicates a new Activity for the Governing Board.
Goal 3: Make Strategic Decisions to Increase the Value and Impact of NAEP

Strategy A – Coordinate the Policy and Operational Arms of NAEP

Ensure coordination among Governing Board and NCES activities to efficiently and effectively achieve the shared goal of improving NAEP.

Actions

1. Ensure coordination between the Governing Board’s and NCES’ implementation of their respective Strategic Plans, through regular information sharing and collaboration between staff of the Governing Board and NCES.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>N/A</td>
<td>Periodic briefings to Board</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

2. Provide input to NCES on the proposal development and review for the next competition of NAEP contracts to support alignment between NAEP contract structures and the Board’s policy priorities.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>N/A</td>
<td>Board priorities reflected in contracts</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

3. Develop a process with NCES to estimate marginal cost impacts of new policies being considered by the Board, so as to inform the Board’s policy decisions.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>N/A</td>
<td>Process created Process successfully used</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

4. Conduct a review of the Governing Board’s existing policies to ensure relevance, reflection of current practice and needs, and to identify if new policies are needed.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>N/A</td>
<td>Policies updated, if appropriate New policies adopted, if appropriate</td>
<td>Year 1</td>
</tr>
</tbody>
</table>

5. Evaluate the Governing Board’s existing structure of standing Committees, quarterly meetings, and other bylaw provisions to determine if adjustments could improve the Board’s operations.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>N/A</td>
<td>Revise bylaws, if appropriate</td>
<td>Years 2-3</td>
</tr>
</tbody>
</table>

*Indicates a new Activity for the Governing Board.
Goal 3: Make Strategic Decisions to Increase the Value and Impact of NAEP

Strategy B – Promote Secondary Research Using NAEP Information

Increase the impact of NAEP information by encouraging secondary uses of the rich resources that NAEP provides to the public.

Actions

1. Encourage greater use of NAEP by researchers and education leaders.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSDAM</td>
<td>Researchers</td>
<td>Publicize NAEP’s expansive resources</td>
<td>Duration of plan</td>
</tr>
<tr>
<td></td>
<td>Policymakers</td>
<td>Build expertise in the uses of NAEP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educators</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Advocate for NCES to use NAEP resources to fund secondary analyses by researchers.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>Researchers</td>
<td>Secondary research funded</td>
<td>Duration of plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Increase awareness of NAEP’s measurement innovations (e.g. Scenario-Based Task design) among assessment experts and educators to support advances in high quality digital-based education assessments.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC</td>
<td>Researchers</td>
<td>TBD</td>
<td>Years 2-3</td>
</tr>
<tr>
<td></td>
<td>Educators</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Indicates a new Activity for the Governing Board.
Goal 4: Innovate to Keep NAEP at the Forefront of Measuring Student Achievement

**Strategy A – Ensure NAEP Remains Relevant**

To stay at the forefront of measuring student achievement, the Governing Board must continuously improve the form and function of NAEP.

**Actions**

1. Continue improving NAEP contextual variables to enhance reporting and analyses opportunities, with consideration for the sensitivity of the information.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC R&amp;D</td>
<td>All</td>
<td>Contextual variables evaluated, Changes proposed, implemented, Contextual variables published and promoted</td>
<td>Duration of Plan</td>
</tr>
</tbody>
</table>

2. Examine if existing NAEP Frameworks need revisions while adhering to the value of maintaining trend (e.g. the NAEP Mathematics Framework).*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC COSDAM</td>
<td>All</td>
<td>Conduct alignment studies between NAEP Frameworks and current state standards, Revised Frameworks, if appropriate</td>
<td>Duration of Plan</td>
</tr>
</tbody>
</table>

3. Respond to the anticipated NAEP Achievement Levels evaluation report by identifying its impact on current Governing Board policies and practices and the use of NAEP generally.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>TBD</td>
<td>Duration of Plan</td>
</tr>
</tbody>
</table>

4. Explore the design and content implications of conducting the NAEP Long Term Trend Assessments in Reading and Mathematics through the main NAEP assessments.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>COSDAM ADC</td>
<td>Researchers</td>
<td>Review conducted policy, if appropriate</td>
<td>Duration of Plan</td>
</tr>
</tbody>
</table>

* Indicates a new Activity for the Governing Board.
Goal 4: Innovate to Keep NAEP at the Forefront of Measuring Student Achievement

Strategy B – Support the Next Frontier of NAEP Innovations

Identify the next “big things” requiring the Governing Board’s attention for the duration of the Strategic Plan and beyond to stay on the forefront of measuring student achievement while also maintaining NAEP’s role as the most trusted source of student academic achievement.

Actions

1. Explore if NAEP should be measuring new areas (e.g. 21st Century Skills).*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADC</td>
<td>All</td>
<td>New Frameworks, if appropriate</td>
<td>Duration of Plan</td>
</tr>
<tr>
<td>COSDAM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Conduct a comprehensive policy-level examination of grade 12 NAEP to determine the most useful and valid approach of assessing high school students.

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>N/A</td>
<td>Policy change, if appropriate</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

3. Explore new approaches to determining the NAEP Assessment Schedule to achieve the Board’s policy priorities with consideration for fiscal uncertainty and public demand.*

<table>
<thead>
<tr>
<th>Committee</th>
<th>Stakeholders</th>
<th>Indicators</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>Alternative policy approaches considered, adopted if appropriate</td>
<td>Duration of plan</td>
</tr>
</tbody>
</table>

*Indicates a new Activity for the Governing Board.
Measuring Success

The Governing Board will monitor the implementation and success of its Strategic Planning Initiative. Ongoing monitoring will help the Board ensure that its implementation is on track and determine if any adjustments are needed to the Strategic Plan. Annually, at each August Governing Board meeting while the Strategic Plan is in effect, the Board will assess its progress towards attaining its Strategic Plan Goals. Upon completion of the Strategic Plan, the Governing Board will approve the final report summarizing the Strategic Plan’s overall success.

Conclusion

An essential role of the Governing Board is to safeguard public trust in NAEP’s assessment of our nation’s elementary and secondary students’ academic performance. NAEP provides our country with information to understand the strengths, weaknesses, and trends in our decentralized system of education. Whenever there is discussion or debate about student achievement, NAEP is relied upon as a trusted and trustworthy source of information.

The imperative for school improvement called for by the 1983 report, A Nation At Risk, that carried through the bi-partisan legislation of the No Child Left Behind Act (NCLB) in 2002 gave way to the emergence of a new era of education improvement efforts reflecting the demands for increased academic rigor, technological sophistication, civic participation, and global perspectives that define the early decades of the twenty-first century. The 2015 passage of the Every Student Succeeds Act, (the bi-partisan reauthorization of the Elementary and Secondary Education Act) raised the bar for elementary and secondary education across the country and simultaneously increased the flexibility of how states achieve and measure these high goals. In the current landscape of state and local flexibility and frequently changing state and local standards and assessments, it is imperative for The Nation’s Report Card to remain the unassailable measure of student progress.

The Governing Board accepts the challenge to prepare students for their future, not our past, and to use assessments to inform the Board’s progress to deliver on this commitment.
National Assessment Governing Board
Nominations Committee

May 14, 2016

7:30 – 8:15 am

AGENDA

Closed Session  7:30 – 8:15 am

<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 – 7:35 am</td>
<td>Welcome, Introductions, and Agenda Overview</td>
</tr>
<tr>
<td></td>
<td><em>Fielding Rolston, Acting Chair</em></td>
</tr>
<tr>
<td>7:35 – 8:15 am</td>
<td>Status of Finalists for Terms Beginning on October 1, 2016 and Next Steps for 2017 Nominations</td>
</tr>
<tr>
<td></td>
<td><em>Committee Members</em></td>
</tr>
</tbody>
</table>
Governing Board’s Preparedness Research Program

For more than a decade, the Governing Board has been working on improving the form, function, and use of NAEP as an indicator of 12th graders’ academic preparedness for postsecondary endeavors. During this May 2016 plenary session, Board members will be briefed on the purpose, history, major milestones, and current status of the Board’s preparedness research program.

Background

Upon his retirement in late 2002, the Governing Board’s first Executive Director, Roy Truby, charged the Board with reviewing and improving grade 12 NAEP. In early 2003, the Governing Board established the National Commission on NAEP 12th Grade Assessment and Reporting. The 18-member Commission, chaired by former Board members Mark Musick and Michael Nettles, issued a March 2004 final report that concluded:

“It is crucial that NAEP’s leaders change 12th grade NAEP to:

• provide 12th grade state level results, and
• report on readiness for college, training for employment, and entrance into the military”

The Governing Board recognized that grade 12 NAEP had not necessarily been designed to support valid inferences related to students’ academic preparedness; further study would be needed to explore the feasibility of this additional use for NAEP.

Governing Board Actions

The Board took the following steps to begin exploring the feasibility of using NAEP to report on academic preparedness for postsecondary endeavors:

• Commissioned a series of papers to explore issues related to methodology, participation, and motivation
• Adopted a Resolution on Reporting on Preparedness of 12th Grade Students for College-Credit Course Work, Training for Employment, and Entrance into the Military
• Created an Ad Hoc Committee on Planning for NAEP 12th Grade Assessments
• Engaged Achieve, Inc. to review the grade 12 NAEP Reading and Mathematics Frameworks and make recommendations on redesigning them to report on 12th graders’ preparedness for college, workforce training, and the military
• Made related revisions to the 2009 NAEP Reading and Mathematics Frameworks
• Added pilot administrations for the first-ever state assessments in NAEP Reading and Mathematics at grade 12 to the NAEP assessment schedule for 2009 and 2013
• Appointed a technical panel on 12th grade preparedness research

The 7-person Technical Panel on 12th Grade Preparedness Research, chaired by Michael Kirst of Stanford University, was charged with helping the Governing Board plan research studies to
support the validity of inferences for using grade 12 NAEP as an indicator of students’ academic preparedness for postsecondary endeavors.

The 2008 final report of the Kirst panel recommended the following types of research studies:

<table>
<thead>
<tr>
<th>Study Type</th>
<th>Key Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content alignment</td>
<td>Is the content of NAEP similar to other relevant tests, such as SAT, ACT, or ACCUPLACER?</td>
</tr>
<tr>
<td>Statistical relationship</td>
<td>How does performance on NAEP compare to performance on other tests?</td>
</tr>
<tr>
<td>Judgmental standard setting</td>
<td>What is the point on the NAEP scale that experts judge as just &quot;academically prepared&quot;?</td>
</tr>
<tr>
<td>Higher education survey</td>
<td>What are the tests and cut-scores used for placement in higher education?</td>
</tr>
<tr>
<td>Benchmarking</td>
<td>How do select groups—such as students in college or job training programs—perform on NAEP?</td>
</tr>
</tbody>
</table>

The Governing Board made the following decisions in implementing the preparedness research program:

- The term “academic preparedness” was used rather than “readiness” to indicate that NAEP was not intending to measure other characteristics needed for success in postsecondary endeavors beyond academic knowledge and skills.

- Academic preparedness for **college**, **job training**, and the **military** were not assumed to be the same; separate research strands were pursued for each outcome.

- The **working definition of academic preparedness for college** refers to the reading and mathematics knowledge and skills needed for placement into entry-level college credit courses that meet general education requirements, without the need for remedial coursework in mathematics or reading. This refers to both 4-year institutions (public and private) and 2-year institutions with degree-bearing programs designed to transfer to 4-year institutions.

- The **working definition of academic preparedness for job training programs** refers to the reading and mathematics knowledge and skills needed to qualify for a job training program without remediation in mathematics or reading.

- To operationalize job training programs, **five exemplar occupations** were selected for use in research studies: Automotive Master Technicians; Computer Support Specialists; Heating, Ventilation and Air Conditioning Technicians (HVAC); Licensed Practical Nurses (LPNs); and Pharmacy Technicians. The exemplar occupations were selected to represent jobs that do not require a 4-year degree and to represent job training programs that require equivalent reading and mathematics knowledge and skills to qualify for entry in both the **military and civilian sectors**.
**Comprehensive Research Program**

Following the guidance of the Technical Panel on 12\textsuperscript{th} Grade Preparedness Research, and under the direction of COSDAM, the Governing Board issued contracts to perform many different research studies from 2008 to the present using multiple methods. The studies focused on academic preparedness for college and/or job training programs; the Governing Board was unable to secure the needed partnerships to investigate academic preparedness for the military.

The studies explored many different angles to the question of whether it was feasible to use NAEP as an indicator of academic preparedness for college and job training programs. Many of the studies led to the exploration of new research questions, and some of the intended studies turned out to be infeasible. Most of the completed studies were either content alignment studies (where the content of NAEP was compared to relevant tests) or statistical relationship studies (where performance on NAEP was compared to other relevant tests).

Results from these studies are available on the Governing Board’s Technical Report on NAEP 12\textsuperscript{th} Grade Preparedness Research.

**Extensive Outreach**

In 2010, the Governing Board appointed the NAEP 12\textsuperscript{th} Grade Preparedness Commission to increase awareness of the importance of preparing students for postsecondary education or job training programs, as measured by NAEP. The 10-member Commission, chaired by former Governor Ronnie Musgrove, was designed to:

- Study and organize the results from the Governing Board’s extensive research program
- Develop a communication strategy to direct attention to the results and findings
- Communicate the results to the public, policymakers, educators, and potential employers
- Conduct meetings, organize presentations, hold public hearings, and meet with people

From 2011 to 2013, the Commission held seven regional symposia in Sacramento; Boston; Nashville; Jackson, MS; Tallahassee; Charleston, WV; and Washington, DC. These events were attended by over 600 stakeholders and often included statements from elected officials and television coverage (videos and other materials are included on the website for each event). There was widespread support for the NAEP academic preparedness initiative across leaders in K-12 and higher education, the business community, civil rights, and legislative policy. In video addresses to the Nashville and Washington, DC symposia, respectively, Senator Lamar Alexander and Secretary of Education Arne Duncan praised the use of NAEP as an indicator of academic preparedness.

Several current and former Board members participated in the symposia, including: David Alukonis, Mitchell Chester, David Driscoll, Chester Finn, Anitere Flores, Ronnie Musgrove, Mark Musick, Susan Pimentel, Fielding Rolston, Blair Taylor, and Darvin Winick.

**Reporting Academic Preparedness for College**

- In August 2013, the Board reviewed the research findings and approved a Resolution to report the grade 12 NAEP reading and mathematics results in terms of plausible estimates.
of the percentage of students who possess the reading and mathematics knowledge, skills, and abilities to be academically prepared for college.

- For grade 12 reading, the Proficient cut score (302) was used to estimate the percentage of students academically prepared for college.

- For grade 12 mathematics, a score of 163 (in between the Basic cut score of 141 and the Proficient cut score of 176) was used to estimate the percentage of students academically prepared for college.

- A summary report and validity argument were prepared in support of the inferences for providing initial national estimates of academic preparedness for college using the grade 12 NAEP reading and mathematics assessments.

- A separate release event was held on May 14, 2014 (one week after the release of the grade 12 Report Cards) to focus on the finding that 39% of grade 12 students in mathematics and 38% of grade 12 students in reading were academically prepared for college.

- The initial estimates were also used to report the 2015 grade 12 results in April 2016.

**Current Status/Next Steps**

- Research on using NAEP for academic preparedness for job training programs has been inconclusive, largely due to huge variability in the knowledge and skills required by different training programs within a single occupation, let alone across the five exemplar occupations. No work is currently underway for academic preparedness for job training; in 2015, the Governing Board released a summary report of lessons learned from the job training research.

- Exploratory studies using grade 8 NAEP to estimate the percentage of students on track to being academically prepared for college by the end of high school were performed in 3 states. The Board has not decided whether to pursue additional research at grade 8.

- Additional research (including longitudinal outcomes of students who took NAEP in grades 8 or 12) is ongoing in several states, along with a planned NAEP-ACT national linking study. Findings from these studies may be used to modify how academic preparedness for college is reported for the 2019 NAEP grade 12 Report Cards.

- The current NAEP Assessment Schedule no longer includes administration of the grade 12 assessments at the state level (due to budgetary constraints).

- The Governing Board’s preparedness technical report website is currently being redesigned to better reach multiple stakeholder groups.

- COSDAM will continue to oversee the technical aspects of the academic preparedness research and will bring future topics to the full Board for continued discussion.
The Nation’s Report Card and 12th Grade Preparedness:

What Can the National Assessment of Educational Progress (NAEP) Tell Us About U.S. Students’ Academic Preparedness?

Why Grade 12?
Grade 12 is a critical transition point for U.S. students. When graduates leave high school, they will enter higher education, civilian or military training programs, or the workforce. Yet we currently don’t know the extent of our 12th graders’ academic preparedness.

On a daily basis we know...
- The fluctuations in the stock market
- The number of bushels of wheat produced nationwide
- The price of an ounce of gold
- Whether our nation’s 12th graders are academically prepared for college and job training

Why NAEP?
NAEP is the only assessment representative of all U.S. 12th graders. As the gold standard for assessing student achievement, NAEP is uniquely positioned to serve as an indicator of 12th grade academic preparedness.

For the first time ever, the National Assessment Governing Board is pursuing a comprehensive program of research to discover how achievement on 12th grade NAEP relates to whether students have the mathematics and reading skills they need for their pursuits beyond high school.

Ultimately, the research and the NAEP results will be available for use by educators and policymakers as a measure of trends in the academic preparedness of our nation’s 12th graders.

What Does It Mean to Be Academically Prepared?
12th graders should have the knowledge and skills in reading and mathematics...
- To qualify for placement into entry-level college credit courses that meet general education requirements, without the need for remedial coursework in mathematics or reading.
- To qualify for a job-training program without remediation in mathematics or reading.
ARE 12TH GRADERS PREPARED?

Preparedness Research Questions

More than 30 research studies, spanning five research areas, will address important links between NAEP and academic preparedness for college and job training.

History of the Preparedness Initiative

2002: The Governing Board begins studying 12th grade NAEP and student achievement at the end of high school.
2004: National blue-ribbon panel recommends that 12th grade NAEP report on preparedness.
2006: NAEP is revised for college and job-training preparedness.
2008: Technical panel recommends series of research studies to report on 12th grade preparedness in reading and mathematics.
2010: Comprehensive program of research begins.
2012: Results of research studies to be released.
2013: Research will continue on academic preparedness for grade 12 NAEP.

Find Out More
For a complete overview of the preparedness research to date, visit: www.nagb.org/preparedness

About NAEP
The National Assessment of Educational Progress (NAEP), also known as The Nation's Report Card, is the only continuing, nationally representative measure of achievement in core subjects at grades 4, 8, and 12. NAEP provides achievement results and reveals trends over time. For more information, visit www.nationsreportcard.gov.

About the Governing Board
The National Assessment Governing Board is an independent, bipartisan organization created by Congress in 1988 to set policy for NAEP. The Board works to improve the reporting of results to make sure they are communicated effectively to a wide range of Americans and is committed to making NAEP an accessible, useful resource. For more information, visit www.nagb.org.
Governing Board and NAEP Resources

Table of Resources and Links

Attached documents are listed with page numbers. Click underlined links to access unattached documents online.

Page No.

National Assessment Governing Board: Authority and Organization

- [NAEP Law]
- [Board By-laws]
- Board Composition and Responsibilities
- Board Members and Categories
- Ethics Primer for the National Assessment Governing Board
- Board Staff Organization
- [NAEP Organizational Model] (relationship to other organizations)
- Board Current Contracts
- [Board 2014 Strategic Communications Plan]

NAEP Schedule of Assessments

- [NAEP Schedule of Assessments] (latest version)
- History of Changes to the NAEP Schedule of Assessments
- [Recent NAEP releases]

General Web-based Resources

- [Home page of Governing Board web site]
- [Home page of the Nation’s Report Card web site]
- Materials for previous Board meetings

Board Policies for NAEP

- General Policy: Conducting and Reporting NAEP
- Framework Development
- Item Development and Review
- Developing Student Performance Levels for NAEP
- Reporting, Release, and Dissemination of NAEP Results
  - Guidelines for the Initial Release of *The Nation’s Report Card*
  - Resolution on Reporting 12th Grade Academic Preparedness for College
  - Resolution on Reporting on Preparedness of 12th Grade Students
- Collection and Reporting of Background Data by NAEP
- NAEP Testing and Reporting on Students with Disabilities and English Language Learners
• Trial Urban District Assessment: Eligibility Criteria and Selection Procedures
  ○ List of Eligible TUDA Districts
• Resolution on Linking NAEP and International Assessments

NAEP Assessment Design

• Overview of NAEP Assessment Design ....................................................................................32
• NAEP Alliance Contractors ........................................................................................................35

Selected Board-commissioned research reports and papers (from most to least recent)

• Technical Report: NAEP 12th Grade Preparedness Research
• Technical Panel on 12th Grade Preparedness Research – Final Report
• The Future of 12th Grade NAEP: Report of the Ad Hoc Committee on Planning for NAEP 12th Grade Assessments in 2009
• Redesigning the National Assessment of Educational Progress

Previous “Inside NAEP” presentations

• Developing NAEP Frameworks: A Look Inside the Process
• Developing NAEP Test Questions
• Introduction to Validity
• NAEP Achievement Levels
• Sampling Concepts

Glossary of Acronyms and Other Terms ........................................................................................36
National Assessment Governing Board

Composition
The Board is non-partisan, with 26 members representing gender, geographic, and racial-ethnic diversity. Specific categories of members specified in the NAEP law:

- **Policymakers**: governors or former governors (2), state legislators (2), chief state school officers (2), local school district superintendent (1), state (1) and local (1) school board members, nonpublic school administrator or policymaker (1)
- **Educators**: classroom teachers (3), principals (2), curriculum specialists (2)
- **Public**: general public representatives (2), parents (2), business representative (1)
- **Technical experts**: testing and measurement experts (3)

*The director of the Institute of Education Sciences serves as an ex-officio 26th member.*

Responsibilities
The responsibilities of the Board are mandated by Congress, and include:

- **Test Development**
  - Select subject areas to assess
  - Develop assessment objectives and test specifications
  - Ensure all items are free from bias
  - Have final authority on appropriateness of all items

- **Technical Methodology**
  - Develop appropriate student achievement levels
  - Design the methodology of the assessment to ensure that assessment items are valid and reliable

- **Reporting and Dissemination**
  - Develop guidelines for reporting and disseminating results
  - Plan and execute the initial public release of NAEP reports
  - Take appropriate actions needed to improve the form, content, use, and reporting of results
## National Assessment Governing Board

### Members and Categories by Term Expiration Date

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anitere Flores</strong></td>
<td><strong>Lucille Davy</strong></td>
<td><strong>Mitchell Chester</strong></td>
<td><strong>Alberto Carvalho</strong></td>
</tr>
<tr>
<td>State Legislator (Republican)</td>
<td>General Public Representative</td>
<td>Chief State School Officer</td>
<td>Local School Superintendent</td>
</tr>
<tr>
<td><strong>Rebecca Gagnon</strong></td>
<td><strong>James Geringer</strong></td>
<td><strong>Shannon Garrison</strong></td>
<td><strong>Carol Jago</strong></td>
</tr>
<tr>
<td>Local School Board Member</td>
<td>Governor (Republican)</td>
<td>Fourth Grade Teacher</td>
<td>Curriculum Specialist</td>
</tr>
<tr>
<td><strong>Andrew Ho</strong></td>
<td><strong>Doris Hicks</strong></td>
<td><strong>Frank Fernandes</strong></td>
<td><strong>Dale Nowlin</strong></td>
</tr>
<tr>
<td>Testing &amp; Measurement Expert</td>
<td>Elementary School Principal</td>
<td>Secondary School Principal</td>
<td>Twelfth Grade Teacher</td>
</tr>
<tr>
<td><strong>Terry Mazany</strong></td>
<td><strong>Tonya Miles</strong></td>
<td><strong>Tonya Matthews</strong></td>
<td><strong>Fielding Rolston</strong></td>
</tr>
<tr>
<td>General Public Representative</td>
<td>General Public Representative</td>
<td>General Public Representative</td>
<td>State School Board Member</td>
</tr>
<tr>
<td><strong>Joseph O’Keefe</strong></td>
<td><strong>Ronnie Musgrove</strong></td>
<td><strong>Chasidy White</strong></td>
<td><strong>Linda Rosen</strong></td>
</tr>
<tr>
<td>Non-public School Administrator or Policymaker</td>
<td>Governor (Democrat)</td>
<td>Eighth Grade Teacher</td>
<td>Business Representative</td>
</tr>
<tr>
<td><strong>(Vacancy)</strong></td>
<td><strong>W. James Popham</strong></td>
<td></td>
<td><strong>Cary Sneider</strong></td>
</tr>
<tr>
<td>State Legislator (Democrat)</td>
<td>Testing &amp; Measurement Expert</td>
<td></td>
<td>Curriculum Specialist</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Ken Wagner</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chief State School Officer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Joe Willhoft</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Testing &amp; Measurement Expert</td>
</tr>
</tbody>
</table>

* Member currently serving 2\textsuperscript{nd} term; not eligible for reappointment

Updated 2/12/16
ETHICS PRIMER

FOR

THE NATIONAL ASSESSMENT GOVERNING BOARD

November 2009
Ethics Division
Office of the General Counsel
U.S. Department of Education
EXECUTIVE SUMMARY ............................................................................................................................................3

ETHICS LAWS AND RULES APPLICABLE TO SGES ........................................................................................................6

I. INTRODUCTION .................................................................................................................................................. 6

II. YOUR STATUS AS A SPECIAL GOVERNMENT EMPLOYEE ........................................................................ 6
    A. What is a “special Government employee”? .................................................................................................6
    B. Do the ethics restrictions apply when I am not working for NAGB? ........................................................... 6

III. CONFLICTS OF INTEREST .............................................................................................................................. 6
    A. What criminal conflict of interest statutes apply to SGEs? ............................................................................... 6
    B. What financial conflicts of interest may arise for SGEs under section 208? ..................................................... 7
    C. How do I resolve a conflict of interest? .............................................................................................................9
    D. What restrictions apply to my representation of third parties under sections 203 and 205? ....................... 10

IV. POST-EMPLOYMENT ....................................................................................................................................10

V. STANDARDS OF ETHICAL CONDUCT AND OTHER ETHICS RULES ................................................................. 10
    A. What restrictions apply if I want to engage in fundraising? ...........................................................................11
    B. What restrictions are there on my acceptance of gifts? .................................................................................11
    C. What restrictions apply if I want to “lobby” Congress? ..............................................................................12
    D. What does “misuse of position” mean? ..........................................................................................................12
    E. May I keep my day job and still serve on NAGB? .........................................................................................12
    F. Are there any restrictions on my political activities? ....................................................................................12
    G. What restrictions do I face if I want to teach, speak, or write on matters that are related to the duties I perform for NAGB? ..................................................................................................................13
    H. What restrictions apply if my government duties involve the awarding of contracts? ....................................13
    I. What restrictions apply to my interaction with foreign entities? .................................................................14
    J. What do I do if I am called to be an expert witness? ..................................................................................14
    K. May I keep and use frequent flyer miles that I earn when I am on official NAGB travel? ..........................15

VI. CONCLUSION .................................................................................................................................................. 15
EXECUTIVE SUMMARY

Now that you are a member of the National Assessment Governing Board (“NAGB”) you need to know what ethics laws and rules apply to you. The following is a very brief summary of these rules. For a more detailed discussion of how these rules apply to you, please refer to the attached summary entitled “Ethics Laws and Rules Applicable to SGEs.”

Your Status as a Special Government Employee

You are considered an SGE and not a regular federal employee because NAGB anticipates that you will be serving the federal government through your position for only 130 days or less during any period of 365 consecutive days. Whether or not you are paid by the Board for your service is irrelevant. This summary discusses how the ethics rules apply to SGEs.

Criminal Statutes Apply to Your Activities

Some of the ethics laws that apply to you carry criminal penalties. Below is a brief summary of the most important of these laws.

- The chief conflict of interest law bars you from participating personally and substantially in your capacity as a member of NAGB in any particular matter before the federal government that has a direct and predictable effect on your own financial interests or the financial interests of others with whom you have certain relationships. See 18 U.S.C. Section 208.

- If you find yourself with a financial conflict of interest, you have four options: (1) disqualify yourself (you don’t participate in any way in the matter); (2) resign from the outside entity that is the basis for the conflict; (3) sell or divest the stock or other financial interest that is the basis for the conflict; or (4) request and obtain a statutory waiver.¹

- Two other laws prohibit you from representing a third party, with or without compensation, before any court or agency in connection with any particular matter involving specific parties in which the United States is a party or has a direct and substantial interest and in which you have participated personally and substantially as an SGE. In addition, if you serve the federal government for more than 60 days during the immediately preceding period of 365 consecutive days, these restrictions apply to any matter that is pending with NAGB. But remember that these restrictions do not apply to particular matters of general applicability, such as broadly applicable policies, rulemaking proceedings or legislation, that do not involve specific parties. See 18 U.S.C. Sections 203 and 205.

¹ In rare circumstances, with the concurrence of the U.S. Office of Government Ethics, you may obtain a waiver of the conflict of interest.
• Another criminal law limits some of your activities after your service on NAGB ends. This law prohibits you from representing others in connection with the same particular matter involving specific parties in which you participated personally and substantially during your service to NAGB. This prohibition lasts for your lifetime. See 18 U.S.C. Section 207.

Standards of Ethical Conduct for Employees of the Executive Branch

The Standards of Ethical Conduct for Employees of the Executive Branch (Standards), 5 C.F.R. Part 2635, are regulations that apply both to regular federal government employees and to SGEs. However, a few exceptions exist in the Standards in recognition of the fact that SGEs are working for the government only in a very limited way. A brief synopsis of some these rules and their exceptions follow.

• **Fundraising:** You may not use your official title, position and authority to engage in fundraising.

• **Gifts:** You may not accept gifts from a “prohibited source” or offered to you because of your official position on NAGB. A prohibited source includes any person: seeking official action from NAGB; doing or seeking to do business with NAGB; conducting activities regulated by NAGB; or having interests that may be substantially affected by your official duties. There are many exceptions to this rule that are discussed in more detail in the accompanying memorandum.

• **Lobbying:** In your role as a member of NAGB, you may not urge others to contact Congress or a state legislature to urge the passage or defeat of legislation. Additional restrictions exist regarding lobbying. You should contact Department of Education’s Ethics Division before engaging in any type of lobbying.

• **Misuse of Position:** You may not use your position on NAGB or nonpublic information gained through your service on NAGB to seek advantage for yourself or others. In addition, you may not use your NAGB title in a manner that makes it appear that NAGB is sanctioning your views, products, services or personal enterprises.

• **Political Activities:** You may not engage in political activity when you are on duty or in a federal government building or car, and you may never use your official title as a member of NAGB in connection with political activities.

• **Teaching, Speaking and Writing:** You may not receive compensation for teaching, speaking or writing if: (1) the invitation was offered to you because of your position on NAGB; (2) the information conveyed by you draws substantially on nonpublic information that you obtained by working on NAGB; (3) the invitation was extended to you by an organization or person who has interests that may be substantially affected by your performance on NAGB; or (4) the subject of your work deals in a significant way
with a matter involving specific parties that you worked on while on NAGB. Again, there are some exceptions to this rule that are outlined in more detail in the accompanying memorandum.

**Required Filing of a Financial Disclosure Report By SGEs**

As a member of the NAGB, you are required to file a confidential financial disclosure report (also referred to as a “450” Report) when you are first appointed, and annually thereafter if you are reappointed. The purpose of the financial disclosure form is to protect you from inadvertently violating any of the criminal conflict of interest statutes and so that NAGB can know that your advice is free from any real or perceived conflicts of interest.

Please do not rely solely on this “Executive Summary” before undertaking your duties. There are many subtle nuances that are not discussed in this summary that may apply to your specific situation. The attached expanded summary provides additional detail that will help you better understand the ethics rules. Please feel free to call or e-mail Marcella Goodridge in the Ethics Division of the Office of the General Counsel at the U.S. Department of Education at (202) 401-8309, or Marcella.Keiller@ed.gov, for answers to any specific ethics questions that may arise in the course of your service on NAGB.
ETHICS LAWS AND RULES APPLICABLE TO SGES

I. INTRODUCTION

Although the ethics rules are numerous and detailed, a single, simple principle underlies these rules: *You should never use your public office for private gain, either for yourself, or for any third party.* In addition, you must refrain not only from engaging in any activity that violates the ethics rules, but you must also refrain from any activity that creates the appearance of a violation of any of these rules. The summary below is designed to help you avoid violating any ethics rules covering your activities as a member of NAGB.

II. YOUR STATUS AS A SPECIAL GOVERNMENT EMPLOYEE

A. What is a “special Government employee”?

Because you have been appointed to be a member of the NAGB and you are expected to perform your duties for not more than 130 days during the 365 days subsequent to the date of your appointment, you are, by law, a “special Government employee” (SGE). As an SGE, you are a federal government employee. This means that upon appointment, you assume the responsibilities, obligations, and restrictions that are part of public service. Because SGEs are not full-time employees, several of these restrictions apply only in limited circumstances.

B. Do the ethics restrictions apply when I am not working for NAGB?

Yes, any restrictions concerning your private activities (representational services, expert witness activities, etc.) apply equally on days when you serve the federal government through your position on NAGB and on days when you do not, except with respect to political activity. If you have not provided any services for the federal government for some time, but have not received a termination date for your appointment, you must seek a formal resolution of the matter before engaging in conduct prohibited by the ethics rules.

III. CONFLICTS OF INTEREST

A. What criminal conflict of interest statutes apply to SGES?

While you are employed as an SGE, you need to pay particular attention to four criminal conflict of interest laws found in Chapter 11, Title 18 of the United States Code: 18 U.S.C. Sections 203, 205, 207 and 208. These criminal laws include some special provisions for the treatment of SGEs. A discussion of these laws and certain related requirements found in other laws and regulations follows.
B. What financial conflicts of interest may arise for SGEs under section 208?

Section 208 prohibits you from participating personally and substantially in any particular matter that has a direct and predictable effect on your financial interests, including certain interests of others that are imputed to you under the statute. This means that you may not work on NAGB matters if you have certain connections – through the ownership of stock, through employment, or by virtue of other circumstances – with an organization that has a financial interest in the matter. For example, you may not work at all on a contract competition if you own stock valued at a certain amount in a company competing for the contract. You may not participate in a discussion of whether to modify an existing contract with a company if you work for that company. And, you may not assist in the development of a scope of work for a contract competition if you know that an organization on which you serve on the Board of Directors plans to compete for that contract.

In addition to your own personal financial interests, the financial interests of the following persons or organizations are imputed to you and also disqualify you from participating in a particular matter:

1. your spouse;
2. your minor child;
3. your general partner;
4. an organization for which you serve as an officer, director, trustee, general partner or employee; and
5. any prospective employer.

Example 1 You are on the governing board of ABC, a nonprofit organization. ABC’s financial interests are imputed to you under the statute. This means that for the purpose of determining whether you have a conflict of interest, ABC’s financial interests are treated as if they were your own. Accordingly, you may not participate in any NAGB matter in which ABC has a financial interest. Similarly, if you were in the process of discussing employment with ABC, you would be barred from participating in any NAGB matter affecting the financial interests of ABC.

Example 2 You are on the governing board of ABC (or employed by ABC, own stock in ABC, seeking employment with ABC, etc). You are asked to participate in the process of reviewing and scoring contract proposals for a contract competition for a NAGB project. Fifteen organizations have submitted a bid. When you open the proposal from one organization, you note that ABC’s name is one of the organizations that has submitted a bid. Or, perhaps ABC is listed as a subcontractor in one of the proposals. This contract competition is a “particular
NOTE: Apart from the criminal conflicts of interest statutes discussed above, a regulation also exists that prohibits you from participating in a matter involving specific parties if a reasonable person would question your impartiality.

You must recuse yourself from a matter as soon as you realize that you have a conflict. If, for example, you notice that you have a conflict when you are in the middle of reviewing contract proposals, you put the proposal back in its envelope and call up an NAGB staff member and let that person know that you think that you are disqualified from working on the competition. If there is any question, you should contact the U.S. Department of Education Office of the General Counsel’s Ethics Division for guidance. Once you have determined that you may not work on this matter, send the proposal back to NAGB staff.

You are permitted to participate in a particular matter affecting one campus of a multi-campus institution of higher education, where the disqualifying interest arises from your employment with a separate campus of the same institution, provided that you have no multi-campus responsibilities at the institution. If you are employed with a large university with multiple campuses and you do not have any multi-campus responsibilities, you may participate in official matters—such as grants, contracts, applications, and other particular matters—that affect the financial interests of another campus in the same university system where you are employed. Below are some examples of how section 208 may apply to your activities.

**Example 3** You are employed as a professor at the University of California-Berkeley. NAGB is planning to evaluate the impact of computer-based testing on students with disabilities and English language learners. UC-Berkeley’s science and technology department has submitted a bid. NAGB’s actions will have a direct and predictable effect on the university’s financial interest. Therefore, you may not participate in any way on this matter.

**Example 4** You are employed as a researcher at the University of California-Berkeley. NAGB is planning to evaluate the impact of computer-based testing on students with disabilities and English language learners. The University of California-Los Angeles (UCLA) has submitted a bid to be the contractor for NAGB’s evaluation. You may participate in this matter because it will not have a direct and predictable effect on either your financial interests or UC-Berkeley’s.
C. How do I resolve a conflict of interest?

1. Disqualification

A common method of resolving a conflict of interest is to disqualify yourself from participating in the matter.

*Example 5* You are serving on NAGB’s Ad Hoc Committee that will examine issues related to computer-based testing for students with disabilities and English language learners, including developing a study of computer-based testing methodologies. The Request for Proposals has been disseminated. One of the bids submitted is from ABC Corporation (ABC). You own $20,000 worth of stock in ABC. You must advise the U.S. Department of Education Office of the General Counsel’s Ethics Division that you own stock in ABC and you will not be able to participate in any way in the entire contract competition. If ABC is awarded the contract, you will also need to disqualify yourself from the entire matter.

2. Divestiture

Divestiture of a disqualifying interest (usually through the sale of stock) is another remedy available to avoid a potential violation of section 208. SGEs are not eligible for a Certificate of Divestiture (CD). A CD is a tax benefit that allows the deferral or nonrecognition of capital gain where an employee divests a financial interest in order to comply with conflict of interest requirements. Unfortunately, Congress specifically excluded SGEs from eligibility to receive CDs. 26 U.S.C. § 1043(b)(1)(A).

3. Resignation

On some very rare occasions when none of the aforementioned options are available or feasible, an SGE may need to resign from participating in an outside activity with an entity if his or her official activities as an SGE have a direct and predictable effect on the financial interest of that entity creating an irreconcilable conflict.

4. Waiver or Authorization

Another remedy to avoid a conflicting financial interest is to request and obtain a statutory waiver by contacting the Department of Education’s Ethics Division (an authorization is similar to a waiver, but only applies to non-statutory conflicts of interest - what are often referred to as “appearances of a conflict”). You may be granted a waiver only if your financial interest is not so substantial as to be deemed to be likely to affect the integrity of your services.

*Example 6* In the scenario described in Examples 1 and 2 above, you are granted a waiver permitting you to participate in a general policy matter that affects ABC’s financial interests as...
long as the matter affects all similarly situated entities in the same manner. But you would remain disqualified from participating in a matter that specifically involves ABC, which in this case means the entire contract competition.

D. What restrictions apply to my representation of third parties under sections 203 and 205?

With regard to particular matters in which you have participated personally and substantially while serving NAGB, you are prohibited from representing a third party on those particular matters, with or without compensation, before any court or agency, when the United States is a party or has a direct and substantial interest in the matter. See 18 U.S.C. Sections 203 and 205.

In addition, if you serve the federal government for more than 60 days during the immediately preceding period of 365 consecutive days, you are prohibited from representing a third party on any matter involving specific parties pending before NAGB, even if your work at NAGB did not involve these matters. These restrictions do not apply to particular matters of general applicability, such as broadly applicable policies, rulemaking procedures or legislation that does not involve specific parties.

IV. POST-EMPLOYMENT

After your appointment terminates at NAGB, you need to pay particular attention to one more criminal statute that subjects you to restrictions regarding certain matters that you may have worked on as a member of NAGB. Pursuant to 18 U.S.C. Section 207, you may never represent any third party, other than in the performance of your official government duties, in connection with the same particular matter involving specific parties in which you participated personally and substantially as a member of NAGB. This is a lifetime prohibition. For example, if you participated in a NAGB discussion concerning a contract to State University, you may never represent State University with respect to that same contract before any official of the Executive Branch of the federal government and you may never represent State University with respect to that contract in any federal court.

Further, if you serve on NAGB more than sixty days and are compensated above a certain level, you may be subject to a one-year “cooling-off” period during which you would be barred from representing before NAGB certain third parties in connection with any matter. There are some exceptions to this law as well, and you should contact the Department of Education’s Ethics Division for guidance.

V. STANDARDS OF ETHICAL CONDUCT AND OTHER ETHICS RULES

The Standards of Ethical Conduct for Employees of the Executive Branch (Standards), 5 C.F.R. Part 2635, are regulations that apply both to regular federal government employees and to SGEs. Although you are treated generally the same as regular employees under the Standards, a few
exceptions do exist for SGEs in recognition of the fact that SGEs are working for the government only in a very limited way. In addition, there are other rules that govern your conduct as an SGE, including the Hatch Act, anti-lobbying rules, the Federal Acquisition Regulation, and rules about accepting gifts and compensation from foreign governments. A brief synopsis of some of these rules follows.

A. What restrictions apply if I want to engage in fundraising?

You may not use your NAGB title, position or authority to solicit funds for any organization. In addition, you may not personally solicit funds or other support from persons whose interests may be affected substantially by the performance or nonperformance of your official duties.

B. What restrictions are there on my acceptance of gifts?

You are prohibited from accepting gifts (almost anything of monetary value) from a “prohibited source” or gifts given because of your official position as a member of NAGB, unless a specific exception applies. The definition of “prohibited source” includes any person:

- seeking official action from NAGB;
- doing or seeking to do business with NAGB; or
- having interests that may be substantially affected by your official duties at NAGB.

The definition also includes organizations the majority of whose members fall within any of these categories. You may accept various benefits resulting from your outside business or employment activities, if a reasonable person would conclude that such benefits are not offered or enhanced because of your official position. The most commonly applicable exceptions to the gift rule allow you to accept:

- Modest items of food other than a meal, such as coffee, soft drinks, or donuts;
- Most plaques, certificates and trophies;
- Discounts available to all Government employees;
- Anything for which you pay market value;
- Gifts valued at $20 or less per occasion, totaling no more than $50 in a calendar year from any one source;
- Gifts clearly motivated by friendship or family relationship;
- Gifts resulting from your outside business activities, including those of your spouse; and
- Free attendance or meal which is provided by:

1. the sponsor of the event for the day on which you are speaking at the event, or for a widely-attended gathering of mutual interest to a number of parties when the necessary determination of agency interest has been made; or

2. someone other than the sponsor of a widely-attended gathering of mutual interest to a number of parties when more than 100 people are expected to attend, the
aggregate value of the gift is under $335, and the necessary determination of agency interest has been made.

C. What restrictions apply if I want to “lobby” Congress?

NAGB and its members are permitted to communicate directly with Congress in their official capacity on matters that are related to legislation or appropriations deemed necessary to conduct NAGB’s “public business” (i.e., the NAGB’s statutory functions and responsibilities). However, the Anti-Lobbying Act, 18 U.S.C. Section 1913, prohibits you, in your official capacity at NAGB, from engaging in “grass-roots lobbying” (i.e., directly or indirectly suggesting or requesting that others contact Congress or a state legislature to urge the passage or defeat of proposed or pending legislation), even if it is related to the NAGB’s public business. The Anti-Lobbying Act also requires that any permissible direct communications with Congress in your official capacity at NAGB be made only through official channels.

None of these restrictions prohibit you from lobbying members of Congress or state legislatures, or urging others to do so, on your own time in your personal capacity. If you lobby Congress or state legislatures in your personal capacity, and the issue is related to NAGB’s business, you should make it clear that you are not representing NAGB and not acting in your official capacity as a member. Also, please note that when you are lobbying as a private citizen, you are not permitted to use government resources or equipment (including, but not limited to, computers, telephones, fax machines, copy machines, stationery), or seek assistance from NAGB staff.

D. What does “misuse of position” mean?

You may not use your position on NAGB to seek advantage for yourself or others. You also may not use nonpublic information gained through your service at NAGB to seek advantage for yourself or others. Finally, you may not use your NAGB title in a manner that makes it appear that the NAGB is sanctioning your views, products, services or personal enterprises. Of course, you may list your membership on NAGB on your curriculum vitae, but you may never use your status as an NAGB member to advertise or promote your personal activities. Please seek advice from the Department of Education Office of the General Counsel’s Ethics Division if you have any questions in this area.

E. May I keep my day job and still serve on NAGB?

Yes, you may continue to collect your regular salary from an outside employer for days on which you are providing services to the federal government (whether your federal government service is paid or unpaid). However, if you have another consultant or advisory position with NAGB or any other federal department or agency, you may not receive per diem or salary from NAGB for the same day for services performed for the two positions.

F. Are there any restrictions on my political activities?

You may not engage in any political activities while you are on duty (i.e., performing
government services) or when you are in a government building or vehicle. Although you are not subject to any restrictions on your political activities when you are not performing government services, you may never use your official title as a member of NAGB in connection with any political activities.

G. What restrictions do I face if I want to teach, speak, or write on matters that are related to the duties I perform for NAGB?

You may not receive compensation for teaching, speaking, or writing if:

- the activity is performed as part of your official duties (e.g., a speech on behalf of NAGB);

- the invitation to engage in the activity was extended primarily because of your official position at NAGB, rather than expertise in the subject matter;

- the invitation or offer of compensation was extended to you by someone with interests that may be affected substantially by your duties;

- the information conveyed through the activity draws substantially on nonpublic information obtained through your service at NAGB; or

- the activity deals, in significant part, with a matter involving specific parties to which you are currently assigned or had been assigned during your current NAGB appointment.

Notwithstanding the restrictions in bold type you may accept compensation for teaching a course requiring multiple presentations offered as part of: (a) the regularly established curriculum of various specified types of educational institutions; or (b) educational or training programs sponsored and funded by federal, State, or local government. However, if you teach at an educational institution, you must not participate in any NAGB matters that involve that institution.

H. What restrictions apply if my government duties involve the awarding of contracts?

If you are involved in the awarding of any contracts, please seek advice from the Ethics Division. There are special provisions that cover your involvement in the awarding of contracts. For example, you may not accept compensation as an employee, officer, director, or consultant of a contractor within the one-year period after leaving Government service where you participated in certain procurement matters pertaining to that contractor. In addition, if you disclose certain information pertaining to Federal procurements that you obtained during your service on a committee, you may face sanctions, including criminal penalties.
I. What restrictions apply to my interaction with foreign entities?

The emoluments clause of the U.S. Constitution prohibits you from receiving any emolument, office or title of any kind from a foreign government, including political subdivisions of a foreign government. An emolument is compensation received by virtue of holding an office or having employment with a foreign government and includes, for example, salary, honoraria, transportation, per diem allowances, household goods, shipment costs, and housing allowances. This clause has been interpreted to be broader than the traditional notion of employment and includes, for example, income received through a partnership when an identifiable portion of the partnership draw can be attributed to the partnership’s fees from such foreign government. This provision has particular relevance to positions with foreign universities that are government-operated, as opposed to private institutions. United States Constitution, art. I § 9, cl. 8. There are also statutory provisions restricting acceptance of gifts from foreign governments. 5 U.S.C. § 7342. You should seek advice from the Ethics Division regarding the details about these restrictions. Additionally, a criminal statute bars employment or consultation with a foreign entity for the purpose of providing foreign agent representation or lobbying. 18 U.S.C. § 219.

The ban on participating in foreign agent activities covered by the Foreign Agents Registration Act (FARA) prohibits representation of foreign governments or foreign political parties before the United States Government, as well as a number of other activities conducted within the United States on behalf of such entities. There are certain FARA exceptions related to trade or commerce, legal representation, humanitarian fundraising, and religious, scholastic, or scientific pursuits. The Lobbying Disclosure Act of 1995 requires certain covered Federal officials who serve as agents of foreign principals (other than foreign governments or foreign political parties) to register if they work on behalf of foreign corporations, associations, or other organizations.

Finally, certain restrictions apply after your position with NAGB terminates. Specifically, 18 U.S.C. § 207 includes restrictions on former employees who participated in trade or treaty negotiations on behalf of the United States (18 U.S.C. § 207(b)) and on former senior employees who wish to represent, or aid or advise in the representation of, a foreign entity with the intent to influence a decision of a Federal employee or agency (18 U.S.C. § 207(f)).

J. What do I do if I am called to be an expert witness?

Government employees generally may not participate as an expert witness, with or without compensation, other than on behalf of the United States, in any proceeding before a federal court or agency in which the United States is a party or has a direct and substantial interest. This restriction applies to most SGEs only if the SGE actually participated officially in the same proceeding or in the particular matter that is the subject of the proceeding. If you are appointed by the President, serve on a commission established by statute, or serve (or are expected to serve) for more than 60 days in a period of 365 days, the restriction on expert service also applies to any proceeding in which NAGB is a party or has a direct and substantial interest.
K. May I keep and use frequent flyer miles that I earn when I am on official NAGB travel?

Yes, you may use frequent flyer miles or other airline awards or promotions accumulated on official NAGB travel for your own personal use.

VI. CONCLUSION

We understand that these laws are complex and may not be intuitive. Again, we caution you that this summary is merely an introduction to the ethics laws and rules that apply to you. You should always feel free to contact the Department of Education Office of the General Counsel’s Ethics Division with any questions or concerns.

Marcella Goodridge Keiller, Attorney
U.S. Department of Education
Office of the General Counsel
400 Maryland Avenue, S.W., Room 6E237
Washington, D.C. 20202-2110
(202) 401-8309
(202) 260-5104 (fax)

Marcella.Keiller@ed.gov
<table>
<thead>
<tr>
<th>Board Committee &amp; Activity</th>
<th>Area of Work</th>
<th>Contractor</th>
<th>Staff Member(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee on Standards, Design and Methodology (COSDAM)</td>
<td>Achievement Levels Setting (TEL)</td>
<td>NCS Pearson Inc. (Year 2 of 2 Years)</td>
<td>Sharyn Rosenberg</td>
</tr>
<tr>
<td>Statistical Linking Studies and Related Data Sharing Agreements</td>
<td>Via states and NAEP Alliance contractors ETS and Westat</td>
<td></td>
<td>Sharyn Rosenberg</td>
</tr>
<tr>
<td>Participant Engagement in NAEP: Critical Review and Synthesis of Research</td>
<td>AnLar Incorporated</td>
<td></td>
<td>Michelle Blair</td>
</tr>
<tr>
<td>Reporting and Dissemination Committee</td>
<td>Outreach and Dissemination</td>
<td>The District Communications Group (Year 1 of 3 Years)</td>
<td>Stephaan Harris</td>
</tr>
<tr>
<td>World Wide Web Services</td>
<td>Quotient, Inc. (Year 1 of 3 Years)</td>
<td>Stephaan Harris</td>
<td>Mary Crovo</td>
</tr>
<tr>
<td>12th Grade Preparedness Reports</td>
<td>Widmeyer Communications (Year 5 of 5 Years)</td>
<td></td>
<td>Mary Crovo Michelle Blair</td>
</tr>
<tr>
<td>Executive Committee</td>
<td>NAGB/Council of Chief State School Officers: State Outreach</td>
<td>Council of Chief State School Officers</td>
<td>Michelle Blair Mary Crovo</td>
</tr>
</tbody>
</table>

April 2016
In 2014 and beyond, the National Assessment Governing Board seeks to focus its communication efforts strategically and cost effectively to “Make Data Matter” for various target audiences. The Board is well-positioned to increase the impact of its outreach, but it must prioritize its audiences and identify its objectives for each, while integrating innovative strategies to elevate the Board’s work—and NAEP—as a thought leader in education.

Reingold proposes three goals the Board can pursue to amplify its outreach efforts.

I. Make a Connection With Target Audiences
II. Engage Audiences Between Report Card Releases
III. Maximize Impact Through Innovation

Reingold’s assumption in developing strategic priorities for the Board is that reporting and dissemination activities must support a vision to make an impact in education through engagement with NAEP that will enable the use, discussion, and sharing of NAEP data and information. A time-phased action plan, including specific outreach tactics and metrics, will be developed with Governing Board staff on the Board’s approval of this strategic communications plan.

The members of the Reporting and Dissemination Committee have identified three key audiences it believes the Board should focus on—parents; teachers and administrators; and policymakers—as each of these audiences is in a position to make an impact through NAEP data. Working with staff, we will identify the Board’s goals and expectations of each audience and the key messages needed to engage each one effectively.

Potential outcomes of the audience-focused outreach are listed below:

**Parents**
- Understand the value of NAEP and its implication for parents.
- Ask informed questions about their child’s education and the school system.
- Use NAEP to consider out-of-school factors that might affect their child’s education.
- Share NAEP information and messages with their parent peers.

**Teachers and Administrators**
- Understand the value of NAEP and its implication for teachers and administrators.
- Use NAEP to influence change within their classroom or school system.
- Educate parents about NAEP data and resources.
- Share and distribute NAEP information to their peers.
**Policymakers**

- Understand the value of NAEP and its implication for education policy.
- Use and cite NAEP data in policy decisions, public statements, and white papers.
- Distribute NAEP information and messages to constituents and peers to help advocate for change.

It is important to remember that messages and calls to action are intended to move the Board’s priority audiences along an engagement continuum, from awareness and education to trial, buy-in, and, ultimately, action. But creating the right messages is only the beginning. It is critical to know which information to deliver first, which should follow, and who are the most credible messengers. We will lay out a cohesive, practical, comprehensive roadmap for reaching the Board’s target audiences that identifies how to take advantage of existing opportunities, what new strategies to develop, and optimal methods of dissemination. The action plan will include a variety of opportunities to connect with each audience to maximize the reach and frequency of each message. The proposed strategies involve cultivating and leveraging partnerships that will include stakeholders or champions. There will also be collaboration with the National Center for Education Statistics (NCES) to ensure efforts are not duplicated, with Board and NCES staff coordinating on roles, responsibilities, and resources on various strategies as needed.

To illustrate the strategies identified above, below we discuss what the execution of each one could involve for the Board’s three priority audiences.

**I. Make a Connection With Target Audiences**

The goal is personal and powerful: “Communicate the Value of NAEP.” This means going beyond the distribution of NAEP data to highlighting, developing, and sharing relevant messages, content, stories, and calls to action for key audiences. Communicating the “So what?” and “Why should we care?” can help the Board move beyond the scores and headlines to clarify the value of NAEP and its important role as an indicator of student achievement.

- **Develop key messages and calls to action for priority audiences.** The Governing Board’s audience is widely diverse—in their knowledge of and experience with NAEP, in their intended uses and consumption of data and information, and in their communications networks, favored channels, and approaches. With these differences in mind, it is imperative that the Governing Board tailor messages for each of its audiences to inspire deeper engagement with NAEP data. Instead of a one-size-fits-all approach, we will define and continually test and adjust the messages that are the most relevant to each audience.

  **Example of the strategy in action for parents:** Include the tailored messages and calls to action on the website’s “Information For” parent pages. The parent landing page could have calls to action including “Learn about NAEP,” “Download NAEP resources,” or “Test yourself on NAEP questions.” The page could also have a section devoted to the Board’s assessment literacy efforts (including resources, information and questions to ask) once outreach strategies from the work group are finalized.
**Example of the strategy in action for teachers and administrators:** The American Federation of Teachers and National Education Association could include a NAEP toolkit with messages for teachers on its website in a resources section.

**Example of the strategy in action for policymakers:** Minneapolis Board of Education and Governing Board member Rebecca Gagnon could use and reference data from *Science in Action: Hands-On and Interactive Computer Tasks From the 2009 Science Assessment* in a discussion with the Minnesota Department of Education and the Minnesota Education Technology Task Force about the importance of science computer labs.

**Impact metrics:** The number of downloads of materials such as a PowerPoint or frequently asked questions PDF; number of clicks on links for calls to action (e.g., “Test yourself on NAEP questions”); number of champions—that is, advocates—who commit to using or distributing the NAEP messaging and toolkit.

- **Expand communications beyond reporting on the scores.** We need to get beyond the typical report presentations of the data and find meaningful ways to elevate the data (and their implications) through materials, messaging, and outreach activities. We will identify and highlight hidden gems of NAEP data, connecting the dots between data and practice and leveraging resources to reach specific audiences to deliver important messages in a meaningful and memorable way. The Governance Board must be a storyteller that educates its audiences about the relevancy of NAEP data and resources in a way that resonates with its audiences’ interests and needs in an actionable manner.

**Example of the strategy in action for parents:** Develop a parent leader discussion guide to assist parent leaders in using NAEP and other assessment data in their conversations with school administrators about improving student achievement for all children.

**Example of the strategy in action for teachers and administrators:** Develop an interactive Prezi presentation (a visually animated storytelling tool for presenting ideas and messages) on NAEP achievement gap data from the recent *2013 Mathematics and Reading, Grade 12* report card for New Leaders, a national nonprofit organization that develops transformational school leaders and designs effective leadership policies and practices for school systems across the country.

**Example of the strategy in action for policymakers:** Governing Board member Anitere Flores could host a Florida Senate session on parent involvement in education to highlight NAEP contextual variables data in reading from the *2013 Mathematics and Reading, Grade 12* report card. For example, when asked whether students discussed what they read, students who reported discussing their reading every day or almost every day had higher reading scores.
Impact metrics: The number of guides distributed at stakeholder conferences or downloaded from the website; number of groups posting the guide on their websites; number of Prezi and data downloads; parent-submitted testimonials and feedback on using the guide to speak with school and district leaders.

- **Tell the NAEP story through user testimonials.** NAEP data become more impactful when stakeholders learn how others use the data to fulfill their missions and advance their educational goals. Working through key groups, we will collect and disseminate real-life testimonials from the priority audiences to become an authentic author of the NAEP story.

  **Example of the strategy in action for parents:** Collaborate with National PTA to solicit testimonials from parents about how they use NAEP and other assessment data, and then promote the testimonials through the Board’s and PTA’s online networks. These testimonials and other NAEP information could also be featured on the websites of other national education groups, encouraging parents to learn about different assessments their children might take and how the data can be used.

  **Example of the strategy in action for teachers and administrators:** Coordinate with elementary school principal and Board member Doris Hicks and future Board member chosen for the secondary school principal slot to collaborate with the National Association of Elementary School Principals and the National Association of Secondary School Principals to solicit testimonials from principals and teachers within their districts about how they use NAEP and the importance of at-home and out-of-school activities that enhance learning, then promote testimonials through the school communication channels.

  **Example of the strategy in action for policymakers:** Collaborate with the National Association of State Boards of Education to collect testimonials from state board members on how data, including NAEP data, are used to inform policy-level decisions and improvements.

**Impact metrics:** The number of NAEP user testimonials received; number of testimonial views online; number of social media shares and engagement; quality of the engagements and comments about parents using data.

- **Potential action taken by key audiences under this goal:** Using NAEP materials and resources on organization websites to inform questions of school and education leaders about school curriculum and district progress; downloading NAEP sample questions to test student knowledge or supplement classroom lessons;

II. Engage Audiences Between Report Card Releases

The goal is ongoing and impactful: “Continual Engagement.” This means building tangible connections—outside of report card release events—between NAEP and its stakeholders, and equipping them with the insight, information, and tools to make a difference in educational quality and student achievement. This important strategy cannot be executed by staff alone, and will require the contributions of Board members and the partnership of stakeholder groups and other NAEP champions, including former Board members.
Expand the report card release life cycle. There is great opportunity for the Governing Board to enliven data and engage target audiences by taking a comprehensive, reimagined view of releasing and reporting on NAEP results that goes beyond the one-day release event. The entire life cycle of an assessment—from developing the framework to fielding assessments to disseminating results—offers content and commentary that, if shared more strategically, will powerfully support the NAEP brand and use of NAEP by target audiences. The Board can both enhance the report card releases and extend the life cycle to make meaningful connections with target audiences by developing pre- and post-release content, and recording and sharing video or audio which tease out and illuminate NAEP data.

**Example of the strategy in action for parents:** For each report card release develop a highlight reel with panelist quotes, select data points, and facts on reading, mathematics, and science contextual variables to send to parent stakeholder groups to distribute to their networks and on the Web.

**Example of the strategy in action for teachers and administrators:** Governing Board member Terry Mazany could host a meeting with the executive director of the Chicago Principals & Administrators Association to discuss the value of NAEP state and TUDA achievement data.

**Example of the strategy in action for policymakers:** Host a briefing with the California State Board of Education on the performance of fourth-grade students in the *NAEP 2012 Writing Grade 4 Pilot* with a diverse panel to include California fourth-grade teacher and Governing Board member Shannon Garrison, the executive director of the National Writing Project, and authors Carol Bedard and Charles Fuhrken.

**Impact metrics:** The numbers of video views and shares; number of groups posting the video; quality of comments and conversations under the video; feedback from stakeholder groups about the impact of the video and parent engagement with the content; number of participants at the meeting or briefing.

**Leverage partnerships with stakeholder organizations and champions.** As a trusted messenger of information to key audiences, the Governing Board needs to mobilize its existing networks, engaging stakeholder groups and champions to share and shape future outreach. Stakeholders and champions are diverse and can be from education associations or news outlets like NBC News. They could also be politicians, celebrities, athletes, or prominent individuals like First Lady Michelle Obama. We will help the Board identify key partnership opportunities for its priority audiences and develop specific recommendations for engagement, to put their distinct capabilities to work in promoting NAEP and extending the Governing Board’s reach. For example, we could keep working with the Alliance for Excellent Education to produce and promote post-release webinars, provide data infographics to the National Council of Teachers of Mathematics, and collaborate with the National Council of La Raza in sponsoring Facebook chats in addition to consistently pursuing new opportunities with key stakeholder organizations.
**Example of the strategy in action for parents:** Collaborate with NBC News’ Education Nation and Pearson on their Parent Toolkit (www.parenttoolkit.com) including NAEP materials, graphics, and downloadable resources on the website that position the Governing Board as an authoritative source of information on student assessment data.

**Example of the strategy in action for teachers and administrators:** Collaborate with Danica McKellar, actress, author, and STEM education advocate, to submit an article to the National Science Teachers Association’s NSTA Express newsletter on the importance of STEM education and girls’ involvement in STEM, and include data from NAEP’s Technology and Engineering Literacy assessment.

**Example of the strategy in action for policymakers:** Arrange for James Geringer and/or Ronnie Musgrove, Board members and former governors, to present at the annual National Governors Association conference on an important policy issue affecting states in which NAEP data and contextual variables are relevant. Additionally, the Board and he governors can collaborate with the Center on Education Policy to include NAEP reading data and contextual variables (such as frequency of discussing what they read or finding reading enjoyable) in their research papers, publications and annual progress report.

**Impact metrics:** The number of clicks on the NAEP content; number of downloads of NAEP materials; use of presented NAEP data by governors and state policy leaders in media citations, state websites and other materials; volume of referral traffic from the Parent Toolkit site back to the Governing Board’s website; Education Nation engagement that identifies stories of the Toolkit in action; number of newsletter opens and clicks; number of research report downloads.

- **Equip, empower, and display thought leadership.** The Governing Board and NCES are well-positioned as thought leaders among researchers and many national policymakers but could expand their influence with other audiences, such as parents, local policymakers, and education practitioners. Governing Board members and staff should be seen by media representatives and stakeholders as valued spokespeople on educational assessment and achievement, including specific topics such as computerized assessments, achievement gap trends, 12th-grade academic preparedness, and the importance of technology, engineering, and literacy. The Board can also continually secure speaking engagements at a variety of events such as the International Reading Association’s annual conference or local PTA chapter meetings, or pitch quotes for inclusion in news articles and op-eds on relevant topics.

**Example of the strategy in action for parents:** Work with Board member and parent Tonya Miles and develop and pitch op-eds that connect NAEP data with important year-round education events, emphasizing the role parents can play in raising student achievement. During Black History Month, pitch a piece to HuffPost Parents that spotlights achievement gap success stories, or pitch a piece about technology and engineering skill-building beyond the classroom to Sacramento Parent magazine.
Example of the strategy in action for teachers and administrators: Co-host a webinar discussion on NAEP state achievement trends with the American Federation of School Administrators, with members weighing in on state-level changes and education initiatives that are aimed at increasing achievement.

Example of the strategy in action for policymakers: Submit a proposal to the National School Board Association’s annual conference for a Board member and NCES to co-host a breakout session to share and discuss the recent 2013 Mathematics and Reading, Grade 12 report card, academic preparedness data, and recent graduation rate research.

Impact metrics: The numbers of op-ed placements, shares, and comments; quality of user engagements and comments; number of follow-up questions from readers; number of new emails collected (from a “Subscribe to the Governing Board” call to action); number of webinar and conference participants and follow-up requests.

➤ Potential action taken by key audiences under this goal: Inspired by op-ed on racial achievement gaps, exploring gaps in their own districts and talking with school leaders about parity of resources; noting performance trends in subjects by state and/or urban district and then using that knowledge to inform state, local, or school district-level decisions regarding academic programs.

III. Maximize Impact Through Innovation

The goal is proactive and cutting-edge: “Lead the Way.” This means reaching and making meaningful connections with priority audiences, customizing events, fostering and driving online conversations, and creating tech-savvy materials with compelling content.

- Customize release event formats. Report cards are not one-size-fits-all; innovative release event strategies are needed to achieve the specific goals of each release. Each release event strategy should have distinct goals, audiences, messages, materials, strategies, and tactics to Make Data Matter. The Governing Board has expanded the report card release event structure from physical events for every release to include webinars and live-streaming during events, a post-release social media Facebook chat, and an online town hall event. We will continue to refine this approach to customizing every release to maximize the immediate release impact and create a sustained conversation that continues to reach and engage key audiences.

Example of the strategy in action for parents: Host a Google Hangout for parents after a NAEP release that can feature panelists from the National Council of La Raza talking about the importance of parent involvement in education, and encourage parent participants to share how they use data to help their students achieve.
**Example of the strategy in action for teachers and administrators:** Develop a Twitter town hall guide (NAEP data points, question-and-answer content, best-practice tips, and facilitation instructions) for teachers and school administrators to host their own facilitated chats with parents and the school district on state-level NAEP data and areas for application.

**Example of the strategy in action for policymakers:** Host an in-person round-table discussion with members of the Massachusetts Mayors' Association on the latest state-level NAEP reading and mathematics results and their state-based implications.

**Impact metrics:** The number of promotions of the online events and shares of the URL; numbers of event participants and total users viewing them or reached; numbers of comments or participants sharing their testimonials; number of follow-up testimonials received for inclusion in materials or on the website.

- **Engage in the online conversation.** It is important to be aware of the conversations on important education issues, but to influence and help shape public understanding and perceptions the Governing Board needs to participate in the conversation with key messages. We will help the Governing Board foster conversations through real-time engagement on social media platforms, develop content such as an article written by a Governing Board member to post on NAEP's upcoming blog coordinated by NCES, and create a strategy to join or host online chat events, sponsor Q&A sessions, or solicit feedback. Champions are key to the success of this effort, providing greater reach and often a more powerful story than the Governing Board can tell alone.

**Example of the strategy in action for parents:** Hold a webinar with the Governing Board’s Education Summit for Parent Leaders attendees and parent leader champions to review the NAEP website workshop tutorial and obtain feedback through a moderated chat on how they have used NAEP data since the event. Compile feedback to create a one-pager and share it with participants.

**Example of the strategy in action for teachers and administrators:** Collaborate with the National Council of Teachers of Mathematics (NCTM) on an online Q&A chat session based on the NAEP *Mathematics Curriculum Study* data, educating NCTM about the wide variance of content in mathematics courses and books with the same name. Board member and math teacher Dale Nowlin could be a participating panelist.

**Example of the strategy in action for policymakers:** Reach out to the National Governors Association (NGA) on Twitter and provide NGA with content and data about the *2013 Mathematics and Reading, Grade 12* report card.

**Impact metrics:** Numbers of campaign participants and user submissions; numbers of engagements (“likes,” comments, shares, retweets, views) for the multimedia submissions; quality of comments on the multimedia submissions; growth in the Governing Board social media audience and number of engaged users discussing assessment data.
- **Create multimedia, digital content and materials.** The Governing Board must present messages, graphics, and images that resonate with target audiences. A wealth of materials has been developed by the Governing Board and NCES, and the first step will be to audit and catalog resources that may be repurposed through outreach and promotional activities. For the materials gaps that are identified, it is imperative to develop interactive, multimedia content and materials that deliver key messages to target priority audiences and include a call to action. Examples include infographics that embellish key report card findings to facilitate understanding and encourage engagement with NAEP data among nonexperts; videos, Prezi, and other presentation tools allowing exploration of the relationships between ideas and numbers and visual presentations of NAEP; and an email newsletter with new content and specific calls to action.

*Example of the strategy in action for parents:* Create a “NAEP for Parents” email newsletter with information on the latest report card data and trends, multimedia content such as video clips or NAEP data user testimonials, and links to other resource or news content and the interactive data maps on the Board’s parent Web pages, to be distributed bimonthly or consistently throughout the year.

*Example of the strategy in action for teachers and administrators:* Create an infographic with “hidden data” gems from the NAEP Grade 8 Black Male Students report and accompanying language to share with the National Alliance of Black School Educators to post on social media.

*Example of the strategy in action for policymakers:* Work with Board member Terry Holliday to create an interactive presentation at CCSSO’s annual large-scale assessment conference on NAEP computer-based assessments, or work with Board member Tom Luna to distribute the dynamic 12th-grade preparedness video highlighting the new college preparedness data to Chiefs for Change members.

**Impact metrics:** Email open rate; numbers of email shares, clicks from email to website, and new email subscribers; number of release participants who list the email as their referral source; numbers of email replies or responses with inquiries about NAEP or acquiring NAEP materials and resources; number of video and infographic views and shares.

- **Potential action taken by key audiences under this goal:** Using contextual data to influence out-of-school factors that have been shown to correlate with achievement; using curriculum study findings to investigate course rigor and influence change for exposure to challenging subject matter.

By pursuing these three fundamental communication goals and identifying priority strategies and tactics, the Governing Board can more effectively reach its target audiences to Make Data Matter and, ultimately, make an impact.
### National Assessment of Educational Progress
Schedule of Assessments
Approved November 21, 2015

The National Assessment of Educational Progress (NAEP) Authorization Act established the National Assessment Governing Board to set policy for NAEP, including determining the schedule of assessments. (P.L. 107-279)

<table>
<thead>
<tr>
<th>Year</th>
<th>Subject</th>
<th>National Grades Assessed</th>
<th>State Grades Assessed</th>
<th>TUDA Grades Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>U.S. History*</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Civics*</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Geography*</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>TECHNOLOGY AND ENGINEERING LITERACY</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2015</td>
<td>Reading*</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Mathematics*</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Science**</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td>2016</td>
<td>Arts*</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2017</td>
<td>Reading</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td>2018</td>
<td>U.S. History</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Civics</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Geography</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Technology and Engineering Literacy</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2019</td>
<td>Reading</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>High School Transcript Study</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>Reading</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Writing</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td>2022</td>
<td>U.S. HISTORY CIVICS GEOGRAPHY</td>
<td>8, 12</td>
<td>8, 12</td>
<td>8, 12</td>
</tr>
<tr>
<td></td>
<td>Economics</td>
<td>8, 12</td>
<td>8, 12</td>
<td>8, 12</td>
</tr>
<tr>
<td></td>
<td>Technology and Engineering Literacy</td>
<td>8, 12</td>
<td>8, 12</td>
<td>8, 12</td>
</tr>
<tr>
<td>2023</td>
<td>Reading</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>4, 8, 12</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td></td>
<td>High School Transcript Study</td>
<td>4, 8</td>
<td>4, 8</td>
<td>4, 8</td>
</tr>
<tr>
<td>2024</td>
<td>ARTS FOREIGN LANGUAGE</td>
<td>8</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Long-term Trend</td>
<td>~</td>
<td>~</td>
<td>~</td>
</tr>
</tbody>
</table>

**NOTES:**
* Assessments not administered by computer. Beginning in 2017 all operational assessments will be digitally based.
** Science in 2015 consisted of paper-and-pencil and digital-based components.
~ Long-term Trend (LTT) assessments sample students at ages 9, 13, and 17 and are conducted in reading and mathematics.
Subjects in **BOLD ALL CAPS** indicate the year in which a new framework is implemented or assessment year for which the Governing Board will decide whether a new or updated framework is needed.
History of Changes to the NAEP Schedule of Assessments

Historical Schedule Changes
The major schedule changes adopted by the Board since 2000 are listed below:
1. Added grade 4 and 8 state-level Reading and Mathematics every two years. (2002) [Prior to the 2002 ESEA reauthorization (NCLB), state assessments at grades 4 and 8 were given every two years with reading and writing in one biennium and mathematics and science in the next, i.e., these subjects and grade 12 subjects were tested once every four years.]
2. Added the High School Transcript Study (HSTS) as a regularly scheduled study. (2005)
4. Added Technology and Engineering Literacy (TEL) to the NAEP subjects assessed. (2005)
5. Added grade 12 state-level Reading and Mathematics for volunteer states with a periodicity of every four years. (2008)
6. Adjusted the periodicity of science to correspond to the periodicity of TIMSS to conduct international benchmarking studies in mathematics and science. (2010)
7. Scheduled Writing as a technology based assessment, beginning with national data collections only and delaying fourth grade in order to complete a special study. (2010)

Other schedule changes and program adjustments from 2000 through 2015 have been due primarily to budget constraints and/or technical challenges, considering options such as:
- Assessing fewer grade levels in non-required subject areas (e.g., U.S. History, Civics, and Geography; Writing; TEL).
- Postponing a state-level assessment
- Postponing a full assessment/study (e.g., World History, Foreign Language, HSTS).
- Changing the sample size and reporting depth for jurisdictions (e.g., alternating subjects with a smaller sample size in a model called focal and non-focal).

Guiding Principles for Schedule Changes
Guiding principles and priorities that have been used to guide planned updates to the NAEP schedule of assessments include:
1. Follow the guidance in the NAEP Act (303(b)(2)),
2. Administer all assessments using technology beginning in 2017,
3. Continue to assess broad-based curricular areas with a priority for science, technology, engineering, and mathematics (STEM),
4. Providing state-level data in curricular areas beyond reading and mathematics,
5. Include more districts in the TUDA program.

Guidance for the schedule is found in Title 303 Sec. 303(b)(2) which addresses the use of random sampling (A), testing in reading and mathematics at grades 4 and 8 once every two years (B), and testing in reading and mathematics at grade 12 at regularly scheduled intervals (at least as often as prior to NCLB (C).

After this initial guidance, Sec. 303(b)(2)(D) provides guidance for including other subjects in grades 4, 8, and 12 to the extent time and resources allow. It says, including assessments “… in regularly scheduled intervals in additional subject matter, including writing, science, history, geography, civics, economics, foreign languages, and arts, and the trend assessment described in subparagraph (F).”
Overview of NAEP Assessment Design
The content and format for each NAEP subject-area assessment is determined by a NAEP assessment framework, developed under the Governing Board’s direction. General details about the structure of NAEP assessments include:

Long Test, Short Student Test Booklet
- Each student gets a small part of the test
- No individual student scores

Common Block Structures Across Subjects
- Items are within blocks, blocks are within booklets
  Example:
  At grade 4: Reading has 10 blocks and Math has 10 blocks

Test Question Types
- Multiple-choice
- Open-ended
- Computer-based tasks (Writing, Science, TEL)

Contextual Questions
- Student, teacher, administrator questionnaires

Student Booklet Block Design
While some NAEP assessments are conducted on a technology-based platform (TEL, Writing), for paper-based assessments NAEP uses a focused balanced incomplete block (BIB) or partially balanced incomplete block (pBIB) design to assign blocks or groups of cognitive items to student booklets. Because of the BIB and pBIB booklet designs and the way NAEP assigns booklets to students, NAEP can sample enough students to obtain precise results for each test question while generally consuming an average of about an hour and a half of each student's time.

The "focused" aspect of NAEP's booklet design requires that each student answer questions from only one subject area. The "BIB" or "pBIB" design ensures that students receive different interlocking sections of the assessment forms, enabling NAEP to check for any unusual interactions that may occur between different samples of students and different sets of assessment questions.

In a BIB design, the cognitive blocks are balanced; each cognitive block appears an equal number of times in every possible position. Each cognitive block is also paired with every other cognitive block in a test booklet exactly the same number of times. In a pBIB design, cognitive blocks may not appear an equal number of times in each position, or may not be paired with every other cognitive block an equal number of times. NAEP booklet design varies according to subject area (e.g., geography, mathematics, reading, science, U.S. history, writing).
Once the instrument developer has laid out the configuration of all blocks for each booklet in a booklet map shown here with the following column headings:

<table>
<thead>
<tr>
<th>Booklet number</th>
<th>Cognitive block 1</th>
<th>Cognitive block 2</th>
<th>Contextual question directions</th>
<th>General student contextual questions</th>
<th>Subject-specific contextual questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

the number of rows (booklet numbers) provides the booklet spiral design information needed for the bundling of the student booklets.


**NAEP Assessment Sample Design**

Each assessment cycle, a sample of students in designated grades within both public and private schools throughout the United States (and sometimes specified territories and possessions) is selected for assessment. In addition, in state assessment years, of which 2007 is an example, the samples of public schools and their students in each state are large enough to support state-level estimates. In all cases, the selection process utilizes a probability sample design in which every school and student has a chance to be selected, and standard errors can be calculated for the derived estimates.

**Public School Selection in State Assessment Years**

The selection of a sample of public school students for state assessment involves a complex multistage sampling design with the following stages:

- Select public schools within the designated areas,
- Select students in the relevant grades within the designated schools, and
- Allocate selected students to assessment subjects.

The Common Core of Data (CCD) file, a comprehensive list of operating public schools in each jurisdiction that is compiled each school year by the National Center for Education Statistics (NCES), is used as the sampling frame for the selection of sample schools. The CCD also contains information about grades served, enrollment, and location of each school. In addition to the CCD list, a set of specially sampled jurisdictions is contacted to determine if there are any newly formed public schools that were not included in the lists used as sampling frames. Considerable effort is expended to increase the survey coverage by locating public schools not included in the most recent CCD file.

As part of the selection process, public schools are combined into groups known as strata on the basis of various school characteristics related to achievement. These characteristics include the physical location of the school, extent of minority enrollment, state-based achievement scores, and median income of the area in which the school is located. Stratification of public schools
occurs within each state. Grouping schools within strata by such selected characteristics provides a more ordered selection process with improved reliability of the assessment results.

On average, a sample of approximately 100 grade-eligible public schools is selected within each jurisdiction; within each school, about 60 students are selected for assessment. Both of these numbers may vary somewhat, depending on the number and enrollment size of the schools in a jurisdiction, and the scope of the assessment in the particular year. Students are sampled from a roster of individual names, not by whole classrooms. The total number of schools selected is a function of the number of grades to be assessed, the number of subjects to be assessed, and the number of states participating.

**Private School Selection in State Assessment Years**

In years in which state-level samples are drawn for public schools, private schools are classified by type (e.g., Roman Catholic, Lutheran, etc.), and are grouped for sampling by geography (Census region), degree of urbanization of location, and minority enrollment. About 700 private schools, on average, are included, with up to 60 students per school selected for assessment. These samples are not large enough to support state-level estimates for private schools. Thus, inferences for private schools are limited to the national level, even in years when public school assessments are state-specific.

A national sample of private schools in all grades is then drawn from a list compiled through the Private School Universe Survey (PSS), which is a mail survey of all U.S. private schools carried out biennially by the U.S. Census Bureau under contract to NCES. The PSS list is updated for new schools only for a sample of Roman Catholic dioceses.

**National-Only Assessment Years**

In years when the NAEP samples are intended only to provide representation at the national level and not for each individual state, the public and private school selection process is somewhat different. Rather than selecting schools directly from lists of schools, the first stage of sampling involves selecting a sample of some 50 to 100 geographic primary sampling units (PSUs). Each PSU is composed of one or more counties. They vary in size considerably, and generally about 1,000 PSUs are created in total, from which a sample is selected. Within the set of selected PSUs, public and private school samples are selected using similar procedures to those described above for the direct sampling of schools from lists. The samples are clustered geographically, which results in a more efficient data collection process. The selection of PSUs is not necessary when the sample sizes are large in each state, as in state assessment years.


**NAEP Alliance Contractors**

NAEP is conducted by the Assessment Division of NCES, which also works with a series of contractors. The following chart presents the structure of the collaboration between these contractors.
NAEP Alliance Contractors

To learn more about NAEP contractors in addition to the NAEP Alliance contractors, visit: http://nces.ed.gov/nationsreportcard/contracts/history.aspx
# Glossary of Acronyms and Other Terms

The following acronyms and terms are commonly used in the work of the National Assessment Governing Board.

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AASA</td>
<td>American Association of School Administrators</td>
</tr>
<tr>
<td>ACT</td>
<td>Formerly American College Testing</td>
</tr>
<tr>
<td>ADC</td>
<td>Assessment Development Committee &lt;br&gt;(Board Committee responsible for test development on all NAEP subjects)</td>
</tr>
<tr>
<td>AERA</td>
<td>American Educational Research Association</td>
</tr>
<tr>
<td>AFT</td>
<td>American Federation of Teachers</td>
</tr>
<tr>
<td>AIR</td>
<td>American Institutes for Research</td>
</tr>
<tr>
<td>ALDs</td>
<td>Achievement Level Descriptions</td>
</tr>
<tr>
<td>ALS</td>
<td>Achievement Levels Setting</td>
</tr>
<tr>
<td>ARRA</td>
<td>American Recovery and Reinvestment Act of 2009</td>
</tr>
<tr>
<td>AYP</td>
<td>Adequate Yearly Progress &lt;br&gt;(From the No Child Left Behind Act)</td>
</tr>
<tr>
<td>BOTA</td>
<td>Board on Testing and Assessment, National Academy of Sciences</td>
</tr>
<tr>
<td>CCSS</td>
<td>Common Core State Standards</td>
</tr>
<tr>
<td>CCSSO</td>
<td>Council of Chief State School Officers</td>
</tr>
<tr>
<td>CGCS</td>
<td>Council of the Great City Schools</td>
</tr>
<tr>
<td>COSDAM</td>
<td>Committee on Standards, Design and Methodology &lt;br&gt;(Board committee responsible for technical issues)</td>
</tr>
<tr>
<td>CRESST</td>
<td>Center for Research on Evaluation, Standards, and Student Testing &lt;br&gt;(Research Center at UCLA)</td>
</tr>
<tr>
<td>DAC</td>
<td>Design and Analysis Committee &lt;br&gt;(Advisory panel to ETS on technical issues in NAEP operations)</td>
</tr>
<tr>
<td>ECS</td>
<td>Education Commission of the States &lt;br&gt;(First NAEP contractor and organization supporting state policy leaders)</td>
</tr>
<tr>
<td>EIMAC</td>
<td>Education Information Management Advisory Consortium &lt;br&gt;(Advisory committee to CCSSO, mostly state testing directors)</td>
</tr>
<tr>
<td>ELs or ELLs</td>
<td>English Learners or English Language Learner &lt;br&gt;(Pronounced &quot;Ls&quot;; formerly called Limited English Proficient or LEP)</td>
</tr>
<tr>
<td>ELPA</td>
<td>English Language Proficiency Assessment &lt;br&gt;(Also ELPA21)</td>
</tr>
<tr>
<td>EPIC</td>
<td>Education Policy Improvement Center</td>
</tr>
<tr>
<td>ESEA</td>
<td>Elementary and Secondary Education Act</td>
</tr>
<tr>
<td>ETS</td>
<td>Educational Testing Service</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Acquisition Regulations</td>
</tr>
<tr>
<td>GAO</td>
<td>Government Accountability Office</td>
</tr>
<tr>
<td>GPO</td>
<td>Government Printing Office</td>
</tr>
<tr>
<td>GSA</td>
<td>General Services Administration</td>
</tr>
<tr>
<td>HSTS</td>
<td>High School Transcript Study &lt;br&gt;(A special NAEP data collection)</td>
</tr>
<tr>
<td>IEP</td>
<td>Individualized Education Plan &lt;br&gt;(A required document under the Individuals with Disabilities Education Act, which specifies learning objectives for an individual student found with a disability)</td>
</tr>
<tr>
<td>IES</td>
<td>Institute of Education Sciences &lt;br&gt;(The Department of Education office in which NCES is located. The Director of IES is an ex-officio member of the Governing Board.)</td>
</tr>
<tr>
<td>IRA</td>
<td>International Reading Association</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>IRT</td>
<td>Item Response Theory (A theory for design, analysis, and scoring of tests)</td>
</tr>
<tr>
<td>KaSA</td>
<td>Knowledge and Skills Appropriate (A series of NAEP research studies to improve measurement precision)</td>
</tr>
<tr>
<td>KSA</td>
<td>Knowledge, Skill, and/or Ability (A statement describing a subset of academic content)</td>
</tr>
<tr>
<td>LEP</td>
<td>Limited English Proficient (Term formerly used for an English Language Learner)</td>
</tr>
<tr>
<td>LTT</td>
<td>Long Term Trend Assessment (Series of NAEP tests that began in the early 1970's)</td>
</tr>
<tr>
<td>MST</td>
<td>Multi-stage Testing (A testing format where subsets of test items are presented to students based on item difficulty and student performance)</td>
</tr>
<tr>
<td>NAE</td>
<td>National Academy of Education</td>
</tr>
<tr>
<td>NAEP</td>
<td>National Assessment of Educational Progress (Pronounced &quot;nape&quot;)</td>
</tr>
<tr>
<td>NAESP</td>
<td>National Association of Elementary School Principals</td>
</tr>
<tr>
<td>NAGB</td>
<td>National Assessment Governing Board (Pronounced &quot;nag bee&quot;)</td>
</tr>
<tr>
<td>NAS</td>
<td>National Academy of Sciences</td>
</tr>
<tr>
<td>NASBE</td>
<td>National Association of State Boards of Education</td>
</tr>
<tr>
<td>NASSP</td>
<td>National Association of Secondary School Principals</td>
</tr>
<tr>
<td>The Nation’s Report Card</td>
<td>Alternate reference for NAEP assessments</td>
</tr>
<tr>
<td>NCES</td>
<td>National Center for Education Statistics (Project office for NAEP in the U.S. Department of Education and IES)</td>
</tr>
<tr>
<td>NCLB</td>
<td>No Child Left Behind Act of 2001</td>
</tr>
<tr>
<td>NCME</td>
<td>National Council on Measurement in Education</td>
</tr>
<tr>
<td>NCTE</td>
<td>National Council of Teachers of English</td>
</tr>
<tr>
<td>NCTM</td>
<td>National Council of Teachers of Mathematics</td>
</tr>
<tr>
<td>NEA</td>
<td>National Education Association</td>
</tr>
<tr>
<td>NEA</td>
<td>National Endowment for the Arts</td>
</tr>
<tr>
<td>NEH</td>
<td>National Endowment for the Humanities</td>
</tr>
<tr>
<td>NGSS</td>
<td>Next Generation Science Standards</td>
</tr>
<tr>
<td>NRC</td>
<td>National Research Council</td>
</tr>
<tr>
<td>NSBA</td>
<td>National School Boards Association</td>
</tr>
<tr>
<td>NSLP</td>
<td>National School Lunch Program</td>
</tr>
<tr>
<td>NVS</td>
<td>NAEP Validity Studies Panel</td>
</tr>
<tr>
<td>OGC</td>
<td>Office of the General Counsel (in the U.S. Department of Education)</td>
</tr>
<tr>
<td>OMB</td>
<td>Office of Management and Budget</td>
</tr>
<tr>
<td>PARCC</td>
<td>Partnership for Assessment of Readiness for College and Careers</td>
</tr>
<tr>
<td>PIRLS</td>
<td>Progress in International Reading Literacy Study</td>
</tr>
<tr>
<td>PISA</td>
<td>Program for International Student Assessment</td>
</tr>
<tr>
<td>POC</td>
<td>Principal Operating Components (Divisions of the U.S. Department of Education)</td>
</tr>
<tr>
<td>PTA</td>
<td>Parent Teacher Association</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Reporting and Dissemination Committee (Board Committee responsible for NAEP reporting issues)</td>
</tr>
<tr>
<td>RFP</td>
<td>Request for Proposals</td>
</tr>
<tr>
<td>RP</td>
<td>Response probability (probability of correct response on a test question)</td>
</tr>
<tr>
<td>RTT</td>
<td>Race to the Top (also referred to as RTTT)</td>
</tr>
<tr>
<td>SBAC</td>
<td>SMARTER Balanced Assessment Consortium</td>
</tr>
<tr>
<td>SD</td>
<td>Students with Disabilities</td>
</tr>
<tr>
<td>SES</td>
<td>Socio-economic Status</td>
</tr>
<tr>
<td>TBA</td>
<td>Technology-based Assessment</td>
</tr>
<tr>
<td>TEL</td>
<td>Technology and Engineering Literacy (A content area assessed by NAEP)</td>
</tr>
<tr>
<td>The Department</td>
<td>United States Department of Education</td>
</tr>
<tr>
<td>The Secretary</td>
<td>Secretary of Education (Honorable Arne Duncan during the Obama administration)</td>
</tr>
<tr>
<td>TIMSS</td>
<td>Trends in International Mathematics and Science Study</td>
</tr>
<tr>
<td>TUDA</td>
<td>Trial Urban District Assessment (NAEP component that measures students in large urban districts)</td>
</tr>
<tr>
<td>DATE AND TIME</td>
<td>EVENT</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Thursday, May 12</td>
<td>Assessment Development</td>
</tr>
<tr>
<td>8:30 am – 4:00 pm</td>
<td>Committee</td>
</tr>
<tr>
<td>Thursday, May 12</td>
<td>Executive Committee</td>
</tr>
<tr>
<td>4:30 – 6:00 pm</td>
<td></td>
</tr>
<tr>
<td>Friday, May 13</td>
<td>Full Board Meeting</td>
</tr>
<tr>
<td>8:30 – 9:45 am</td>
<td>General Session</td>
</tr>
<tr>
<td></td>
<td>(Committee meetings:</td>
</tr>
<tr>
<td>10:00 am – 12:15 pm</td>
<td>Closed Working Lunch Session</td>
</tr>
<tr>
<td></td>
<td>12:30 – 2:00 pm</td>
</tr>
<tr>
<td></td>
<td>Open Session</td>
</tr>
<tr>
<td></td>
<td>2:30 – 5:00 pm</td>
</tr>
<tr>
<td>Friday, May 13</td>
<td>Full Board Working Dinner</td>
</tr>
<tr>
<td>6:30 – 9:30 pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturday, May 14</td>
<td>Nominations Committee</td>
</tr>
<tr>
<td>7:30 – 8:15 am</td>
<td></td>
</tr>
<tr>
<td>Saturday, May 14</td>
<td>Full Board meeting</td>
</tr>
<tr>
<td>8:30 am – 12:00 pm</td>
<td></td>
</tr>
</tbody>
</table>
Shuttle Service from BWI Thurgood Marshall Airport, Dulles International Airport and Ronald Reagan National Airport

Super Shuttle provides shuttle service from BWI Thurgood Marshall Airport (BWI), Dulles International Airport (IAD) and Washington Reagan National Airport (DCA) to the Tysons Corner Marriott. For pick up, claim your luggage and proceed to Ground Transportation/Shared Ride Vans. Reservations are not required for transportation to the hotel. However, reservations are required for transportation to the airport. 24-hour notice is preferred, and reservations can be made on-line at www.supershuttle.com, or by calling toll free (800) 258-3826. The one-way fare is $78 from BWI, $28 from Dulles and $32 from Reagan.

Taxi Service

Arrivals and Departures via BWI Thurgood Marshall Airport and Ronald Reagan National Airport

Several taxi companies provide service from BWI Thurgood Marshall Airport (BWI) and Ronald Reagan National Airport (DCA). The one-way trip from BWI takes approximately one hour and the fare is approximately $145.00. The one-way fare from Reagan is approximately $40-50 and travel time is approximately 25 minutes. Taxi stands are located outside the airport and hotel.

Arrivals and Departures via Dulles International Airport

Washington Flyer Taxi Service (703) 661-6655 provides taxi service from Dulles International Airport. The one-way fare is approximately $40 per person and travel time is approximately 25 minutes. Upon arrival at Dulles, proceed to the baggage claim/arrivals area on the lower level of the Main terminal and proceed to the Washington Flyer taxi stand. A curbside representative will assist you with coordinating service.

For return trips to Dulles from the Tysons Corner Marriott, Red Top Taxi Cab Company (703) 522- 3333 provides taxi service. The hotel bellman will assist you with service.

Public Transportation-Metrorail

The Tysons Corner Marriott is metro rail accessible via the Tysons Corner Metro station on the Silver line. The hotel provides complimentary shuttle service from the Metro station. Call (703) 734-3200 to request a ride. Service is on a first come, first serve basis from 7:00 am until 11:00 pm. The average wait time is 15 minutes.

Parking

On-site daily parking is available in the hotel’s parking garage. The self parking rate is $9 per day with in and out privileges.
Dear Colleague,

Ensuring that all students have access to science, technology, engineering, and math (STEM) education is fundamental to the U.S. Department of Education's (Department) goal of providing equitable educational opportunities so that all students are prepared to succeed in college, careers, and life. To further the goal of STEM education for all and to better coordinate efforts across Federal agencies to provide high-quality STEM education, the Committee on STEM Education of the National Science and Technology Council developed a five-year STEM Education strategic plan. Coordination among Federal agencies, State educational agencies (SEAs), local educational agencies (LEAs), and private sector partners is essential to accomplishing the goals outlined in this plan.

The purpose of this letter is to help SEAs, LEAs, and their partners better understand how to use Federal funds to support innovative Pre-K-12 STEM education strategies to ensure equity in the 2016-2017 school year under the Elementary and Secondary Education Act of 1965 (ESEA), as amended by the No Child Left Behind Act of 2001 (NCLB). In addition, this letter includes references to the Every Student Succeeds Act (ESSA). This information may be useful for SEAs, LEAs, and their partners as they contemplate the transition from NCLB to the ESSA, which explicitly-mentions STEM.

In order to help SEAs, LEAs, and their partners identify potential ways to use Federal formula grant funds to support STEM education during the 2016-2017 school year, this letter provides examples of how funds from title I, title II, title III, and title IV of the ESEA, as amended by NCLB, the Individuals with Disabilities Education Act (IDEA), and the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins) can support efforts to improve Pre-K-12 instruction and student outcomes in STEM fields.

These examples fall into the following categories:

1. Increase students' equitable access to STEM courses and experiences, including out-of-school programs, STEM-themed schools, and career pathways;

For the purposes of this letter, consistent with the Every Student Succeeds Act (ESSA), all references to STEM include computer science.

In general, consistent with the ESSA transition provisions and the Consolidated Appropriations Act, 2016, fiscal year (FY) 2016 formula grant funds under the ESEA, as amended by ESSA, will be awarded and administered in accordance with the ESEA as in effect on the day before the date of enactment of the ESSA (i.e., the requirements promulgated under NCLB). For additional information regarding FY 2016 ESEA formula grant funds, see the Department's Dear Colleague letter of January 28, 2016, at: www2.ed.gov/policy/elsec/leg/essa/transitionsy1 6 17-dcl.pdf.

Although the examples provided in this letter are limited to the ESEA, as amended by NCLB, Perkins, and IDEA, funds from other formula and competitive grant programs administered by the Department may also be used to support STEM learning. Also, references to possible uses of IDEA and Perkins funds apply beyond the 2016-2017 school year.

The phrase "out-of-school programs" refers to before- and after-school programs and summer learning opportunities.

www.ed.gov

The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access.
2. Support educators' knowledge and expertise in STEM disciplines through recruitment, preparation, support, and retention strategies; and

3. Increase student access to materials and equipment needed to support inquiry-based pedagogy and active learning.  

Enhancing the impact of STEM education programs and maximizing the impact of available Federal resources necessitate leveraging various sources of support. For example, an SEA or LEA might use title I funds to purchase STEM materials, devices, or STEM-focused digital learning resources; title II funds to train educators on new STEM concepts and approaches; title III funds to provide access to STEM resources specifically developed for English language learners; and Perkins funds to develop a comprehensive STEM pathway program. In addition, under title IV, part A, an SEA may continue to provide students at 21st Century Community Learning Centers program sites with the opportunity to engage in authentic STEM content that aligns with their school day and to focus on hands-on, STEM-rich experiences. An SEA or LEA could also apply for discretionary competitions to support STEM, such as the Department's CTE Makeover Challenge designed to support the enhancement of learning spaces. All uses of Federal resources must comply with applicable laws and requirements for each funding source.

We hope the examples and other information provided in this letter will be helpful in your efforts to provide access to high-quality STEM programs and resources as well as to improve learning and achievement for all students.

Sincerely,

adya Chi noy Dabby
Assistant Deputy Secretary
Office of Innovation and Improvement

Johan E. Uvin
Deputy Assistant Secretary
Delegated the Duties of the Assistant Secretary, Office of Career, Technical, and Adult Education

nn Whalen
Senior Advisor to the Secretary
Delegated the Duties of the Assistant Secretary
Office of Elementary and Secondary Education

Michael K. Yudin
Assistant Secretary
Office of Special Education and Rehabilitative Services

---

5 Active learning is a process whereby students engage in activities such as reading, writing, discussion, prototyping, or problem-solving that promote analysis, synthesis, and evaluation of course content.

6 Schools operating a title I schoolwide program under ESEA may use title I, part A funds to acquire devices, including tablets, laptops, and other devices, as part of a comprehensive plan to upgrade the educational program of a school, consistent with the school's comprehensive needs assessment.
Examples of Leveraging ESEA, IDEA, and Perkins Funds for STEM Education for School Year 2016-2017

The pace of technological and scientific change continues to accelerate, and students beginning elementary school will graduate into an innovation economy with new technologies, scientific advances, and job opportunities that did not exist a decade ago. To best prepare for this future, all students will benefit from a solid foundation in the STEM fields. The Department encourages educators at every level to pursue innovative strategies and active teaching methods in STEM, while working to ensure equitable educational opportunities across STEM disciplines. To help catalyze such innovation, this letter provides examples that illustrate how grantees may use funds made available under the ESEA, as amended by NCLB, IDEA, and Perkins.

The use of funds under any grant program must be an allowable use of funds that is consistent with the intent and purpose of the program. The examples below highlight ways in which a grantee might be able to use Federal funds for STEM education in the 2016-2017 school year to:

1. Increase students' equitable access to STEM courses and experiences, including out-of-school programs, STEM-themed schools, and career pathways;
2. Support educators' knowledge and expertise in STEM disciplines through recruitment, preparation, support, and retention strategies; and
3. Increase student access to materials and equipment needed to support inquiry-based pedagogy and active learning.

Except as otherwise noted, statutory references in the examples below are to the ESEA, as amended by NCLB.

Increase students' equitable access to STEM courses and experiences, including out-of-school programs, STEM-themed schools, and career pathways: STEM learning occurs across a variety of places and times. In 2014, the National Research Council convened experts from the formal, informal, and out-of-school learning communities to explore how these three contexts could improve STEM learning for all students. A 2013 report found that by the time a student from a low-income family reaches 6th grade, he or she will typically have had 6,000 fewer hours of out-of-school or summer enrichment activities than a more economically advantaged peer.

---


8 The 6,000 Hour Learning Gap Infographic by Expand ED Schools www.expandedschools.org/sites/default/files/tasc 6000-hours-infographic.pdf
To help address this critical gap, schools, SEAs, and LEAs may use Federal funds to support increased access to STEM opportunities both during the school day and out-of-school time.

1. Increasing access to rigorous STEM coursework for all students: Depending on the student population served, program funds (see potential options below) may be used to support dual or concurrent enrollment programs, early college high school models, or other methods to increase access to rigorous STEM coursework to enhance career and college readiness. Schools and LEAs may utilize Federal funds to support STEM coursework for:
   a. Students attending a school operating a title I schoolwide program, consistent with the school's comprehensive needs assessment (ESEA section 1114);
   b. Supplemental English language acquisition activities in STEM courses (ESEA section 3115);
   c. Eligible students with disabilities under IDEA who require college coursework in order to receive a free appropriate public education, and making regular education STEM instruction more accessible to students with disabilities who may require additional supports (IDEA section 1411 and section 1414).

2. Out-of-School Time: SEAs and their subgrantees (e.g., LEAs, community-based organizations, and other public and private entities) may use funds from the Department's 21st Century Community Learning Center grants to provide high-quality STEM programs and activities to students in out-of-school learning settings (ESEA section 4201).

3. Career-based experiential learning: Perkins funds may be used to support collaborations with technology industries to offer voluntary internships, apprenticeships, and mentoring programs that improve the mathematics and science knowledge of students (Perkins section 135). Funds reserved for State leadership activities may also be used to support, develop, improve, or expand the use of technology through collaborations with technology industries to offer voluntary internships and mentoring programs (Perkins section 124).

4. STEM-focused schools and pathways:
   a. Eligible LEAs or consortia of LEAs could use STEM-focused instructional activities under the Magnet School Assistance Program (ESEA section 5301 and section 5307) to establish theme-based magnet schools that attract students of diverse backgrounds; and
   b. Public charter schools could support STEM initiatives using funds received under the Charter Schools Program (ESEA section 5202).

5. Field trips: Eligible title I schools operating a schoolwide program may use title I funds to support activities such as field trips to increase access to real-world, hands-on STEM experiences, activities, and applications. Such uses must be consistent with applicable SEA or LEA policies, Federal requirements for uses of funds, and the school's comprehensive needs assessment (ESEA section 1114).

Support educators' knowledge and expertise in STEM disciplines through recruitment, preparation, support, and retention strategies: Educators have an incredible impact on student learning and engagement. To help envision ways Federal resources may be utilized to support the continuum of STEM educator development, the Department invites SEAs, LEAs, institutions of higher education (IHEs), and their partners to consider the following:

---

9 For additional guidance on title I eligibility, please visit www2.ed.gov/programs/titleiparta/index.html.
1. Recruiting and preparing novice STEM educators, including those from groups historically underrepresented in STEM. Some examples include:
   a. Utilize title II funds to provide stipends to attract STEM educators to the profession (ESEA section 2113 and section 2123); and
   b. Utilize title II funds to recruit qualified individuals with STEM content knowledge from other fields to become teachers, including professionals from other occupations, former military personnel, and recent graduates with records of academic distinction (ESEA section 2113 and section 2123).

2. Developing effective STEM pedagogy to improve teaching and learning. Some examples include:
   a. Utilize title II funds to provide professional learning opportunities to teachers or principals. Examples include sustained relevant professional development opportunities offered by informal science institutions (such as science museums, Federal labs, or nonprofits) (ESEA section 2113 and section 2123);
   b. Utilize title II funds to support educators as they implement new courses, such as computer science and engineering (ESEA section 2113 and section 2123);
   c. Utilize title II funds to support educators to effectively teach students with disabilities in STEM subjects (ESEA section 2113 and section 2123);
   d. Utilize title II funds to provide supplemental support to educators to effectively teach English learners in STEM subjects (ESEA section 3115, section 2113 and section 2123);
   e. Utilize title II funds to support elementary STEM teachers, including preschool educators, to incorporate STEM experiences into their classrooms and to utilize effective STEM pedagogy in their teaching (ESEA section 2113 and section 2123);
   f. Utilize title II funds to train or provide professional development for educators to incorporate technology into effective STEM instruction through blended learning (ESEA section 2113 and section 2123); and
   g. Use funds reserved by the State for leadership activities to offer internships that provide valuable work experience, which may include internship programs that provide relevant business experience, for secondary and postsecondary teachers, faculty, administrators, and career guidance and academic counselors who are involved in integrated career and technical education programs (Perkins section 135 and 124).

3. Supporting leadership pathways for STEM educators. Some examples include:
   a. Hire STEM-coaches: LEAs may use title II funds to hire STEM coaches to help grantees tailor professional learning to the needs of individual educators. For example, coaches might help educators bolster their STEM content knowledge or expand STEM pedagogy to include problem- or project-based active learning or maker techniques (ESEA section 2113 and section 2123); and
   b. Provide differential or incentive pay for teachers, principals or school leaders in high-need subject areas, such as STEM, to serve in high-need schools, or to reward the work of teachers and leaders who have demonstrated effectiveness in improving student outcomes in STEM areas (ESEA section 2113 and section 2123).
Increase student access to materials and equipment needed to support inquiry-based pedagogy and active learning: Supporting students in STEM learning can require additional resources and technologies; the Department invites SEAs, LEAs, and other grantees to consider the following:

1. Devices: Federal funds may be used by grantees to purchase devices for students to access materials and general instruction and to collaborate with peers and educators and to support STEM learning.
   a. Provide Students with Mobile Learning Devices to support STEM learning: Schools operating a title I schoolwide program may use title I, part A funds to acquire devices, including tablets, laptops, and other devices, as part of a comprehensive plan to upgrade the educational program of a school, consistent with the school’s comprehensive needs assessment (ESEA section 1114); and
   b. Provide Students with Disabilities with Assistive Technology Devices: SEAs may use IDEA Part B section 611 funds they retain for authorized State-level activities, other than administration, to improve the use of technology in the classroom for students with disabilities, in order to enhance their learning. 10 LEAs may use IDEA Part B funds to enable students with disabilities to participate in STEM courses (IDEA section 611).

2. Labs and specialized learning spaces: Title I funds may be used by title I schools operating schoolwide programs to update existing STEM-related labs and lab materials, or other specialized learning spaces, to support inquiry-based STEM or maker activities, as part of a comprehensive plan to upgrade the educational program of a school, consistent with the school’s comprehensive needs assessment (ESEA section 1114).

3. Supporting English Learners: LEAs may use title III, part A funds to improve instruction for English learners by acquiring supplementary digital learning resources and software that will support English learners’ acquisition of English proficiency and STEM content proficiency, including materials in languages other than English (ESEA section 3115).

4. Use Technology to Connect Educators with STEM Professionals: Consistent with their subgrant applications, IHE-LEA partnerships that receive SEA subgrants may use title II, part B Math Science Partnership funds to purchase software and devices that are an essential component of their plans to create and provide digital professional learning communities with practicing scientists or engineers. In addition, LEAs may use their title II, part A funds for this purpose. These activities may be especially helpful in rural schools and communities (ESEA section 2202 and section 2123).

These are just a few examples of allowable uses of Federal funds that might support the development, implementation, and expansion of STEM approaches to help improve student...
achievement in the 2016-2017 school year. To identify further opportunities, please review the statutes, regulations, and guidance for each Federal program or contact your Department program officer. Additional resources are available at https://innovation.ed.gov/stem.

Information about the ESSA

On December 10, 2015, President Obama signed into law the ESSA, which prioritizes excellence and equity and reauthorizes the ESEA, as amended by NCLB. For additional information, resources and guidance, please visit http://www.ed.gov/essa.

The ESSA explicitly mentions STEM. Sections from titles II and IV of ESSA that explicitly mention STEM are copied below for your reference:

**STEM Master Teacher Corps (ESEA, as amended by ESSA, title II, section 2245):** From funds reserved for title II national activities, grants may be awarded to: (1) SEAs to enable them to support the development of a statewide STEM master teacher corps or (2) SEAs or nonprofit organizations in partnership with SEAs to support the implementation, replication or expansion of effective STEM professional development programs in schools across the State through collaboration with school administrators, principals, and STEM educators.

**Activities to Support Well-Rounded Educational Opportunities (ESEA, as amended by ESSA, title IV, section 4107):** Each LEA or consortium of LEAs that receives an allocation under section 4105(a) shall use a portion of such funds to develop and implement programs and activities that support access to a well-rounded education and may include programming and activities that improve instruction and student engagement in science, technology, engineering, and mathematics, including computer science, such as:

a. Increasing access for students through grade 12 who are members of groups underrepresented in STEM fields;
b. Supporting the participation of low-income students in nonprofit competitions related to STEM subjects;
c. Providing hands-on learning and exposure to STEM subjects and supporting the use of field-based or service learning to enhance students' understanding of the STEM subjects;
d. Supporting the creation and enhancement of STEM-focused specialty schools;\(^{11}\)
e. Facilitating collaboration among school, after-school program, and informal program personnel to improve the integration of programming and instruction in STEM subjects; and
f. Integrating other academic subjects including the arts, into STEM subject programs to increase participation in STEM subjects, improve attainment of skills related to STEM, and promote well-rounded education.

---

\(^{11}\) ESEA, as amended by ESSA, title IV, section 4102 defines a STEM-focused specialty school to mean a school, or dedicated program within a school, that engages students in rigorous, relevant, and integrated learning experiences focused on science, technology, engineering, and mathematics, including computer science, which include authentic schoolwide research.
21st Century Community Learning Centers (ESEA, as amended by ESSA, title IV, section 4205): Each eligible entity that receives an award under section 4204 may use the award to carry out a broad array of expanded learning program activities that advance student academic achievement and support student success, including programs that build skills in STEM, including computer science, and that foster innovation in learning by supporting nontraditional STEM education teaching methods.