

# National Assessment Governing Board Committee on Standards, Design and Methodology

Friday, August 2, 2019  
11:00 am – 1:00 pm

## AGENDA

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11:00 – 11:55 am	COSDAM Discussion of Preliminary Ideas for Governing Board Plan to Implement Formal Response to Evaluation of NAEP Achievement Levels  <i>Gregory Cizek, Achievement Levels Working Group Chair Andrew Ho, COSDAM Chair</i>	Attachment A
11:55 am – 12:00 pm	Break	
12:00 – 1:00 pm	Joint Meeting with the Reporting & Dissemination (R&D) Committee: Improving Communication of NAEP Achievement Levels  <i>Gregory Cizek Andrew Ho Rebecca Gagnon, R&amp;D Committee Chair</i>	Attachment A
	Information Item  Update on Implementing the Strategic Vision (SV #2-10)	Attachment B

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## **Developing a Comprehensive Plan to Implement the Governing Board’s Response to the 2016 Evaluation of NAEP Achievement Levels**

### *Background*

During the March 2019 Board meeting, Governing Board Chair Beverly Perdue established an Achievement Levels Working Group. The intended outcome of the Working Group is to develop a comprehensive plan (including a list of activities for the Governing Board to pursue in conjunction with the National Center for Education Statistics) to fully respond to the [National Academies of Sciences, Engineering, and Medicine \(NAS\) evaluation of NAEP achievement levels](#). The Board issued an initial response to the evaluation in December 2016 (attached) and adopted a revised policy on [Developing Student Achievement Levels for NAEP](#) in November 2018. The next step is to provide more detail about how each recommendation from the evaluation will be addressed (using guidance from the revised policy statement, where appropriate), including priorities and timelines for accomplishing this large body of work.

The Working Group will develop a comprehensive plan that includes proposed actions for the seven recommendations of the NAS evaluation:

1. Evaluating the alignment of NAEP achievement level descriptions (ALDs)
2. Determining whether the trial status of the NAEP achievement levels can be removed
3. Establishing regular recurring reviews of the ALDs
4. Exploring relationships between NAEP achievement levels and external measures
5. Appropriately interpreting and using NAEP achievement levels
6. Articulating accurate inferences that can be made from achievement levels and from scale scores
7. Establishing a regular cycle for considering desirability of conducting a new standard setting

The Achievement Levels Working Group is comprised of the following members:

Chair: Gregory Cizek  
 Father Joe O’Keefe  
 Fielding Rolston  
 Linda Rosen  
 Joe Willhoft

Periodic meetings will occur in person and via conference calls. Governing Board staff will provide support for organizing and tracking the activities of the Working Group. Other resources will be needed and included as appropriate, especially the involvement of NCEs staff. The culminating activity of the Working Group is a comprehensive plan for full Board action; the goal is to present the plan for full Board discussion at the November 2019 Board meeting and action at the March 2020 Board meeting. The implementation of the Board’s work as outlined in the adopted plan will occur primarily under the direction of COSDAM, with the involvement of other committees as appropriate (e.g., R&D for issues related to the communication of the achievement levels).

*July 2019 Update***Summary of Working Group Activities**

<b>Date</b>	<b>Activity</b>
March 22	Gregory Cizek and Sharyn Rosenberg met in Chapel Hill, NC to discuss initial ideas.
April 22	The Working Group discussed how to approach the work, including planning for the May 2019 in-person meeting.
May 3	The Working Group convened in Washington, DC to discuss preliminary ideas and potential timelines for addressing each recommendation.
May 29	Governing Board staff met with NCES Commissioner Lynn Woodworth and Associate Commissioner Peggy Carr to seek their input.
June 12	In a teleconference, the Working Group discussed NCES' input, a summary of proposed plans, and planned next steps.
July 23	Gregory Cizek and Governing Board staff will meet with Lynn Woodworth and Peggy Carr in Washington, DC to discuss their reactions to the Working Group's preliminary plans.

During the upcoming August Board meeting, Working Group Chair Gregory Cizek will present some preliminary plans and proposed next steps for Committee reaction and discussion. The discussion will inform a more comprehensive draft plan to be shared and discussed with the full Board during the November Board meeting.

The joint meeting with the Reporting and Dissemination Committee will focus on issues related to communication of the NAEP achievement levels (Recommendations #5 and 6).

## **National Assessment Governing Board’s Response to the National Academies of Sciences, Engineering, and Medicine 2016 Evaluation of NAEP Achievement Levels**

### *Legislative Authority*

Pursuant to the National Assessment of Educational Progress (NAEP) legislation (Public Law 107-279), the National Assessment Governing Board (hereafter the Governing Board) is pleased to have this opportunity to apprise the Secretary of Education and the Congress of the Governing Board response to the recommendations of the National Academies of Sciences, Engineering, and Medicine evaluation of the NAEP achievement levels for mathematics and reading (Edley & Koenig, 2016).

The cited legislation charges the Governing Board with the authority and responsibility to “develop appropriate student achievement levels for each grade or age in each subject area to be tested.” The legislation also states that “such levels shall be determined by... a national consensus approach; 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; ... [and] shall be updated as appropriate by the National Assessment Governing Board in consultation with the Commissioner for Education Statistics” (Public Law 107-279).

### *Background*

NAEP is the largest nationally representative and continuing assessment of what our nation’s elementary and secondary students know and can do. Since 1969, NAEP has been the country’s foremost resource for measuring student progress and identifying differences in student achievement across student subgroups. In a time of changing state standards and assessments, NAEP serves as a trusted resource for parents, teachers, principals, policymakers, and researchers to compare student achievement across states and select large urban districts. NAEP results allow the nation to understand where more work must be done to improve learning among all students.

For 25 years, the NAEP achievement levels (*Basic*, *Proficient*, and *Advanced*) have been a signature feature of NAEP results. While scale scores provide information about student achievement over time and across student groups, achievement levels reflect the extent to which student performance is “good enough,” in each subject and grade, relative to aspirational goals.

Since the Governing Board began setting standards in the early 1990s, achievement levels have become a standard part of score reporting for many other assessment programs in the US and abroad.

## Governing Board Response

### *Overview*

The Governing Board appreciates the thorough, deliberative process undertaken over the past two years by the National Academies of Science, Engineering, and Medicine and the expert members of the Committee on the Evaluation of NAEP Achievement Levels for Mathematics and Reading. The Governing Board is pleased that the report concludes that the achievement levels are a meaningful and important part of NAEP reporting. The report states that, “during their 24 years [the achievement levels] have acquired meaning for NAEP’s various audiences and stakeholders; they serve as stable benchmarks for monitoring achievement trends, and they are widely used to inform public discourse and policy decisions. Users regard them as a regular, permanent feature of the NAEP reports” (Edley & Koenig, 2016; page Sum-8). The Governing Board has reviewed the seven recommendations presented in the report and finds them reasonable and thoughtful. The report will inform the Board’s future efforts to set achievement levels and communicate the meaning of NAEP *Basic*, *Proficient*, and *Advanced*. The recommendations intersect with two Governing Board documents, the Strategic Vision and the achievement levels policy, described here.

On November 18, 2016, the Governing Board adopted a Strategic Vision (<https://www.nagb.org/content/nagb/assets/documents/newsroom/press-releases/2016/nagb-strategic-vision.pdf>) to guide the work of the Board through 2020, with an emphasis on innovating to enhance NAEP’s form and content and expanding NAEP’s dissemination and use. The Strategic Vision answers the question, “How can NAEP provide information about how our students are doing in the most innovative, informative, and impactful ways?” The Governing Board is pleased that several of the report recommendations are consistent with the Board’s own vision. The Governing Board is committed to measuring the progress of our nation’s students toward their acquisition of academic knowledge, skills, and abilities relevant to this contemporary era.

The Governing Board’s approach to setting achievement levels is articulated in a policy statement, “Developing Student Performance Levels for the National Assessment of Educational Progress” (<https://www.nagb.org/content/nagb/assets/documents/policies/developing-student-performance.pdf>). The policy was first adopted in 1990 and was subsequently revised in 1995,

with minor wording changes made in 2007. The report motivates the revision of this policy, to add clarity and intentionality to the setting and communication of NAEP achievement levels.

The seven recommendations and the Governing Board response comprise a significant research and outreach trajectory that the Governing Board can pursue over several years in conjunction with key partners. The Governing Board will implement these responses within resource constraints and in conjunction with the priorities of the Strategic Vision.

### *Evaluating the Alignment of NAEP Achievement Level Descriptors*

*Recommendation #1: Alignment among the frameworks, the item pools, the achievement-level descriptors, and the cut scores is fundamental to the validity of inferences about student achievement. In 2009, alignment was evaluated for all grades in reading and for grade 12 in mathematics, and changes were made to the achievement-level descriptors, as needed. Similar research is needed to evaluate alignment for the grade 4 and grade 8 mathematics assessments and to revise them as needed to ensure that they represent the knowledge and skills of students at each achievement level. Moreover, additional work to verify alignment for grade 4 reading and grade 12 mathematics is needed.*

The report's primary recommendation is to evaluate the alignment, and revise if needed, the achievement level descriptors for NAEP mathematics and reading assessments in grades 4, 8, and 12. The Governing Board intends to issue a procurement for conducting studies to achieve this goal. The Governing Board has periodically conducted studies to evaluate whether the achievement level descriptors in a given subject should be revised, based on their alignment with the NAEP framework, item pool, and cut scores. The Governing Board agrees that this is a good time to ensure that current NAEP mathematics and reading achievement level descriptors align with the knowledge and skills of students in each achievement level category. In conjunction with the response to Recommendation #3, the updated Board policy on NAEP achievement levels will address the larger issue of specifying a process and timeline for conducting regular recurring reviews of the achievement level descriptions in all subjects and grades.

The Governing Board agrees strongly with the recommendation that, while evaluating alignment of achievement level descriptors is timely, it is not necessary to consider changing the cut scores or beginning a new trend line at this time. The NAEP assessments are transitioning from paper-based to digital assessments in 2017, and current efforts are focused on ensuring comparability between 2015 and 2017 scores. The Governing Board articulated this in the 2015 Resolution on Maintaining NAEP Trends with the Transition to Digital-Based Assessments (<https://www.nagb.org/content/nagb/assets/documents/policies/resolution-on-trend-and-dba.pdf>).

*Recommendation #2: Once satisfactory alignment among the frameworks, the item pools, the achievement-level descriptors, and the cut scores in NAEP mathematics and reading has been*

*demonstrated, their designation as trial should be discontinued. This work should be completed and the results evaluated as stipulated by law: (20 U.S. Code 9622: National Assessment of Educational Progress: <https://www.law.cornell.edu/uscode/text/20/9622> [September 2016]).*

Ultimately, the Commissioner of Education Statistics is responsible for determining whether the “trial” designation is removed. The Governing Board is committed to providing the Commissioner with the information needed to make this determination in an expedient manner.

### *Regular Recurring Reviews of the Achievement Level Descriptors*

*Recommendation #3: To maintain the validity and usefulness of achievement levels, there should be regular recurring reviews of the achievement-level descriptors, with updates as needed, to ensure they reflect both the frameworks and the incorporation of those frameworks in NAEP assessments.*

The Board’s current policy on NAEP achievement levels contains several principles and guidelines for *setting* achievement levels but does not address issues related to the continued use or reporting of achievement levels many years after they were established. The revised policy will seek to address this gap by including a statement of periodicity for conducting regular recurring reviews of the achievement level descriptors, with updates as needed, as called for in this recommendation. The Governing Board agrees that it is important to articulate a process and timeline for conducting regular reviews of the achievement level descriptors rather than performing such reviews on an ad hoc basis.

### *Relationships Between NAEP Achievement Levels and External Measures*

*Recommendation #4: Research is needed on the relationships between the NAEP achievement levels and concurrent or future performance on measures external to NAEP. Like the research that led to setting scale scores that represent academic preparedness for college, new research should focus on other measures of future performance, such as being on track for a college-ready high school diploma for 8th-grade students and readiness for middle school for 4th-grade students.*

In addition to the extensive work that the Governing Board has conducted at grade 12 to relate NAEP mathematics and reading results to academic preparedness for college, the Governing Board has begun research at grade 8 with statistical linking studies of NAEP mathematics and reading and the ACT Explore assessments in those subjects. This work was published while the evaluation was in process and was not included in the Committee’s deliberations. Additional studies in NAEP mathematics and reading at grades 4 and 8 are beginning under contract to the National Center for Education Statistics (NCES). The Governing Board’s Strategic Vision includes an explicit goal to increase opportunities for connecting NAEP to other national and

international assessments and data. Just as the Board's previous research related grade 12 NAEP results in mathematics and reading to students' academic preparedness for college, the Governing Board anticipates that additional linkages with external measures will help connect the NAEP achievement levels and scale scores to other meaningful real-world indicators of current and future performance.

### *Interpretations and Uses of NAEP Achievement Levels*

*Recommendation #5: Research is needed to articulate the intended interpretations and uses of the achievement levels and collect validity evidence to support these interpretations and uses. In addition, research to identify the actual interpretations and uses commonly made by NAEP's various audiences and evaluate the validity of each of them. This information should be communicated to users with clear guidance on substantiated and unsubstantiated interpretations.*

The Governing Board's Strategic Vision emphasizes improving the use and dissemination of NAEP results, and the Board's work in this area will include achievement levels. The Governing Board recognizes that clarity and meaning of NAEP achievement levels (and scale scores) are of utmost importance. The Governing Board will issue a procurement to conduct research to better understand how various audiences have used and interpreted NAEP results (including achievement levels). The Governing Board will work collaboratively with NCES to provide further guidance and outreach about appropriate and inappropriate uses of NAEP achievement levels.

### *Guidance for Inferences Made with Achievement Levels versus Scale Scores*

*Recommendation #6: Guidance is needed to help users determine inferences that are best made with achievement levels and those best made with scale score statistics. Such guidance should be incorporated in every report that includes achievement levels.*

The Governing Board understands that improper uses of achievement level statistics are widespread in the public domain and extend far beyond the use of NAEP data. Reports by the Governing Board and NCES have modeled appropriate use of NAEP data and will continue to do so. This recommendation is also consistent with the goal of the Strategic Vision to improve the dissemination and use of NAEP results. The Governing Board will continue to work with NCES and follow current research to provide guidance about inferences that are best made with achievement levels and those best made with scale score statistics.

## *Regular Cycle for Considering Desirability of Conducting a New Standard Setting*

*Recommendation #7: NAEP should implement a regular cycle for considering the desirability of conducting a new standard setting. Factors to consider include, but are not limited to: substantive changes in the constructs, item types, or frameworks; innovations in the modality for administering assessments; advances in standard setting methodologies; and changes in the policy environment for using NAEP results. These factors should be weighed against the downsides of interrupting the trend data and information.*

When the Board’s achievement levels policy was first created and revised in the 1990s, the Board was setting standards in each subject and grade for the first time and had not yet considered the need or timeline for re-setting standards. To address this recommendation, the Governing Board will update the policy to be more explicit about conditions that require a new standard setting.

### *Board’s Commitment*

The Governing Board remains committed to its congressional mandate to set “appropriate student achievement levels” for the National Assessment of Educational Progress. The Board appreciates the report’s affirmation that NAEP achievement levels have been set thoughtfully and carefully, consistent with professional guidelines for standard setting, and based on extensive technical advice from respected psychometricians and measurement specialists. The Board also takes seriously the charge to develop the current achievement levels through a national consensus approach, involving large numbers of knowledgeable teachers, curriculum specialists, business leaders, and members of the general public throughout the process. This is only fitting given the Governing Board’s own congressionally mandated membership that explicitly includes representatives from these stakeholder groups.

The Governing Board remains committed to improving the process of setting and communicating achievement levels. The Governing Board is grateful for the report recommendations that will advance these aims.

### *Reference*

Edley, C. & Koenig, J. A. (Ed.). (2016). *Evaluation of the Achievement Levels for Mathematics and Reading on the National Assessment of Educational Progress*. Washington, DC: The National Academies Press.

### Strategic Vision Activities Led by COSDAM

During the November 2016 Board meeting, a [Strategic Vision](#) was formally adopted to guide the Board’s work over the next several years. For each activity led by COSDAM, information is provided below to describe the current status and recent work, planned next steps, and the ultimate desired outcomes. Please note that many of the Strategic Vision activities require collaboration across committees and with NCES, but the specific opportunities for collaboration are not explicitly referenced in the table below. In addition, the activities that include contributions from COSDAM but are primarily assigned to another standing committee (e.g., framework update processes) or ad hoc committee (i.e., exploring new approaches to postsecondary preparedness) also have not been included below.

The Governing Board’s Assistant Director for Psychometrics, Sharyn Rosenberg, will answer any questions that COSDAM members have about ongoing or planned activities.

<b>Strategic Vision Activity</b>	<b>Current Status and Recent Work</b>	<b>Planned Next Steps</b>	<b>Desired Outcome</b>
<p>SV #2: Increase opportunities to connect NAEP to administrative data and state, national, and international student assessments</p> <p><i>Incorporate ongoing linking studies to external measures of current and future achievement in order to evaluate the NAEP scale and add meaning to the NAEP achievement levels in reporting. Consider how additional work could be pursued across multiple subject areas, grades, national and international assessments, and longitudinal outcomes</i></p>	<p>Ongoing linking studies include: national NAEP-ACT linking study; longitudinal studies at grade 12 in MA, MI, TN; longitudinal studies at grade 8 in NC, TN; NAEP-TIMSS linking study; NAEP-HSLS linking study; NAEP Validity Studies (NVS) studies</p> <p>Informational update on current studies was provided in the March 2018 COSDAM materials</p> <p>Results from the national NAEP-ACT linking study were presented to COSDAM at the March 2019 Board meeting; the report is being finalized</p>	<p>Complete ongoing studies</p> <p>Decide what new studies to take on</p> <p>Decide how to use and report existing and future results</p> <p>Complete additional studies</p>	<p>NAEP scale scores and achievement levels may be reported and are better understood in terms of how they relate to other important indicators of interest (i.e., other assessments and milestones)</p>

Strategic Vision Activity	Current Status and Recent Work	Planned Next Steps	Desired Outcome
<p>SV #3: Expand the availability, utility, and use of NAEP resources, in part by creating new resources to inform education policy and practice</p> <p><i>Research when and how NAEP results are currently used (both appropriately and inappropriately) by researchers, think tanks, and local, state and national education leaders, policymakers, business leaders, and others, with the intent to support the appropriate use of NAEP results (COSDAM with R&amp;D and ADC)</i></p> <p><i>Develop a statement of the intended and unintended uses of NAEP data using an anticipated NAEP Validity Studies Panel (NVS) paper and the Governing Board's research as a resource (COSDAM with NCES)</i></p> <p><i>Disseminate information on technical best practices and NAEP methodologies, such as training item writers and setting achievement levels</i></p>	<p>Ina Mullis of the NVS panel spoke with COSDAM at the March 2017 Board meeting and is working on a white paper about the history and uses of NAEP</p> <p>During the August 2018 Board meeting, COSDAM discussed how to use information from an ongoing study to inform a policy statement on intended and appropriate uses of NAEP</p> <p>During the March 2019 and May 2019 Board meetings (and via email), COSDAM has been discussing drafts of a statement on interpretations and uses of NAEP</p> <p>This idea was generated during the August 2017 COSDAM discussion of the Strategic Vision activities</p>	<p>Full Board discussion of statement on intended uses of NAEP</p> <p>NCES produces documentation of validity evidence for intended uses of NAEP scale scores</p> <p>Governing Board produces documentation of validity evidence for intended uses of NAEP achievement levels</p> <p>(Some of the above work will be incorporated into the plan under development by the Achievement Levels Working Group)</p> <p>Work with NCES and R&amp;D to refine list of technical topics for dissemination efforts</p>	<p>Board adopts formal statement or policy about intended uses of NAEP. The goal is to increase appropriate uses and decrease inappropriate uses (in conjunction with dissemination activities to promote awareness of the policy statement)</p> <p>Stakeholders benefit from NAEP technical expertise</p>

Strategic Vision Activity	Current Status and Recent Work	Planned Next Steps	Desired Outcome
<p>SV# 5: Develop new approaches to update NAEP subject area frameworks to support the Board’s responsibility to measure evolving expectations for students, while maintaining rigorous methods that support reporting student achievement trends</p> <p><i>Consider new approaches to creating and updating the achievement level descriptors and update the Board policy on achievement levels</i></p>	<p>Input for the policy revision was provided through a panel of standard setting experts, a literature review on considerations for creating and updating achievement level descriptors (ALDs), and a technical memo on developing a validity argument for the NAEP achievement levels (early 2018)</p> <p>COSDAM discussed the policy revision during the May and March 2018 Board meetings, with a full Board discussion during the August 2018 Board meeting</p> <p>Public comment was sought from August 30 – October 15, 2018; Board calls to discuss the comments took place in October</p> <p>The revised policy was unanimously adopted during the November 2018 Board meeting</p> <p>The Achievement Levels Working Group was formed in March 2019 to develop a comprehensive plan for responding to the evaluation</p>	<p>Board staff and COSDAM will work on implementing the revised policy on NAEP achievement level setting, including reviewing and updating achievement level descriptions</p> <p>COSDAM and R&amp;D will discuss preliminary ideas from Achievement Levels Working Group during the upcoming August Board meeting</p> <p>Full Board discussion of comprehensive plan will take place in November 2019, with action planned for March 2020</p>	<p>Board has updated policy on achievement levels that meets current best practices in standard setting and is useful for guiding the Board’s achievement levels setting work</p>

Strategic Vision Activity	Current Status and Recent Work	Planned Next Steps	Desired Outcome
<p>SV# 7: Research policy and technical implications related to the future of NAEP Long-Term Trend assessments in reading and mathematics</p> <p><i>Support development and publication of multiple papers exploring policy and technical issues related to NAEP Long-Term Trend. In addition to the papers, support symposia to engage researchers and policymakers to provide stakeholder input into the Board's recommendation</i></p>	<p>White papers commissioned, symposium held (March 2017), and follow-up event held at American Educational Research Association (AERA) conference (April 2017)</p> <p>Several Board discussions took place during 2017 and 2018</p> <p>The NAEP budget in Fiscal Year 2019 was increased by \$2 million with the goal of moving up the next administration of LTT</p> <p>Following discussion at the November 2018 Board meeting, Chair Bev Perdue sent a response to Congress indicating that the Board would add a paper-based 2020 LTT administration to the NAEP Assessment Schedule</p> <p>The Board took action on a NAEP Assessment Schedule during the May 2019 Board meeting, to include administration of the Long-Term Trend Assessments</p>	<p>NCES will present design considerations for LTT bridge studies at a future Board meeting</p>	<p>Determine whether changes to the NAEP LTT schedule, design and administration are needed (led by Executive Committee and NCES)</p>

Strategic Vision Activity	Current Status and Recent Work	Planned Next Steps	Desired Outcome
<p>SV# 9: Develop policy approaches to revise the NAEP assessment subjects and schedule based on the nation’s evolving needs, the Board’s priorities, and NAEP funding</p> <p><i>Pending outcomes of stakeholder input (ADC activity), evaluate the technical implications of combining assessments, including the impact on scaling and trends</i></p>	<p>COSDAM presentation and discussion on initial considerations for combining assessments</p> <p>During the past 2 years, there have been several full Board presentations and discussions on the NAEP Assessment Schedule</p> <p>Action on the NAEP Assessment Schedule took place during the May 2019 Board meeting</p>		<p>Determine whether new assessment schedule should include any consolidated frameworks or coordinated administrations</p>
<p>SV# 10: Develop new approaches to measure the complex skills required for transition to postsecondary education and career</p> <p><i>Continue research to gather validity evidence for using 12<sup>th</sup> grade NAEP reading and math results to estimate the percentage of grade 12 students academically prepared for college</i></p>	<p>Several studies are ongoing (see activities under SV# 2)</p> <p>During the November 2018 Board meeting, the Board took action to explore the creation of a postsecondary preparedness dashboard</p>	<p>Decide whether additional research should be pursued at grade 8 to learn more about the percentage of students “on track” to being academically prepared for college by the end of high school or whether additional research should be conducted with more recent administrations of NAEP and other tests</p> <p>Decide whether Board should make stronger statement and/or set “benchmarks” rather than using “plausible estimates”</p>	<p>Statements about using NAEP as an indicator of academic preparedness for college continue to be defensible and to have appropriate validity evidence</p>