

National Assessment Governing Board

Assessment Development Committee

November 16, 2018

AGENDA

10:30 – 11:05 am	Welcome and Opening Remarks	
	CLOSED SESSION	
	Vocabulary Assessment in NAEP Reading: Latest NCES Research and Development <i>Eunice Greer, NCES</i>	Attachment A
11:05 – 11:20 am	Committee Recommendation for the NAEP Reading Framework (SV#5) <i>Carol Jago, ADC Chair</i>	Attachment B
11:20 – 11:50 am	NAEP Mathematics Framework Update: Progress Report (SV#5) <i>Mark Loveland and Ann Edwards, WestEd</i>	Attachment C
11:50 am – 12:20 pm	Briefing: Assessment Systems in Other Countries (SV#8) <i>Art Thacker, Human Resources Research Organization (HumRRO)</i>	Attachment D
12:20 – 12:30 pm	Next Steps & Questions on Information Items <i>Carol Jago, ADC Chair</i>	
Information Items	Implementation of ADC Strategic Vision Activities	Attachment E
	Item Review Schedule	Attachment F



NAEP VOCABULARY ASSESSMENT: UPDATE AND OVERVIEW

The current Reading Framework calls for the assessment of “meaning vocabulary”. Meaning vocabulary is defined as “...the application of one’s understanding of word meanings to passage comprehension.” (2009 NAEP Reading Framework, p. 32). Initially, most NAEP reading blocks, which comprised a passage and 10 – 13 items, included 2 – 3 meaning vocabulary items. In order to have sufficient numbers of items to yield reliable scale scores, “reading half-blocks” were created. These blocks included 2 passages, selected for their rich vocabulary. These half-block passages were half the length of normal NAEP passages and each half- block passage included 5 – 6 vocabulary items. These vocabulary blocks were spiraled with the normal, full-length passage blocks. Vocabulary scale scores were reported, through 2015, but the high correlations between meaning vocabulary coupled with the restricted range of performance on the items, called into question the usefulness of the measure.

In November of 2016, NCES convened a panel of experts in vocabulary learning and assessment. This team began to work together as the NAEP Vocabulary Panel. The primary charge to the Vocabulary Panel was to recommend ways to enhance the operationalization of Meaning Vocabulary assessment in NAEP Reading as a means of improving the Meaning Vocabulary measure. The overarching principle guiding the work of the Vocabulary Panel was the same as that guiding the current Meaning Vocabulary measure—i.e., Meaning Vocabulary items are meant to assess students’ use of words to build text understanding, not simply knowledge of isolated words. (2009 NAEP Reading Framework, p. 32). The panel members worked together over a period of six months to: (1) integrate current research on vocabulary knowledge and assessment with the existing guidelines for Meaning Vocabulary and (2) create prototypes for new items.

This presentation will serve to bring the Assessment Development Committee up to date on the status of NAEP’s assessment of vocabulary within the Reading assessment. The presentation will address four topics:

- The history of NAEP’s efforts to assess meaning vocabulary
- The relevant research that informed the Vocabulary Panel’s recommendations for new items and formats
- The Vocabulary Panel’s recommendations for new Meaning Vocabulary item types, including examples of new, piloted items from 4th and 8th grade
- Recommendations for Expanding Meaning Vocabulary as it is addressed in the NAEP Reading Framework

COMMITTEE RECOMMENDATION FOR THE NAEP READING FRAMEWORK

The Assessment Development Committee (ADC) hosted a panel discussion in March 2018 and collected several expert papers as part of its [Review of the NAEP Reading Framework](#). In April and August 2018, the ADC met via teleconference to discuss and refine the Committee's recommendation on the [NAEP Reading Framework](#). The Committee's recommendation is intended to set the scope of the framework update and indicate the Board's priorities. If the Committee recommends a major update, the recommendation will also serve as a charge for the Framework Visioning Panel that will be convened by the Governing Board to develop detailed recommendations for the framework update. In accordance with the Governing Board [Framework Development Policy](#), the Visioning Panel shall include a wide array of leading voices in reading.

A draft of the Committee's recommendation follows. At the November 2018 Board meeting, ADC Chair Carol Jago will invite additional discussion and comments in order to finalize the recommendation for full Board action in March 2019.

**The National Assessment Governing Board Charge to the Visioning and Development Panels
For the 2025 National Assessment of Educational Progress (NAEP)
Reading Framework**

Whereas, The Nation’s Report Card—also known as the National Assessment of Educational Progress (NAEP)—is mandated by Congress to conduct national assessments and report data on student academic achievement and trends in public and private elementary schools and secondary schools, and is prohibited from using any assessment to “evaluate individual students or teachers” or “to establish, require, or influence the standards, assessments, curriculum, ... or instructional practices of states or local education agencies” ([Public Law 107-279](#));

Whereas, Congress specifically assigned the National Assessment Governing Board responsibilities to “develop assessment objectives consistent with the requirements of this [law] and test specifications that produce an assessment that is valid and reliable, and are based on relevant widely accepted professional standards”;

Whereas, the Governing Board’s [Strategic Vision](#) adopted in November 2016 established that the Board will, “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”;

Whereas, the Governing Board established in its [Framework Development Policy](#) that the Board shall conduct “a comprehensive, inclusive, and deliberative process” to determine and update the content and format of all NAEP assessments;

Whereas, in accordance with the Governing Board’s Framework Development Policy, the Board’s Assessment Development Committee conducted a review of the current [NAEP Reading Framework](#), which included seven papers from leading reading educators;

Whereas, based on the review of the NAEP Reading Framework conducted by the Assessment Development Committee, the Committee concludes that a substantial framework update is required to address digital platforms and new research, and recommends that the Board update the NAEP Reading Framework last updated in 2004 “to be informed by a broad, balanced, and inclusive set of factors” balancing “current curricula and instruction, research regarding cognitive development and instruction, and the nation’s future needs and desirable levels of achievement, ” in accordance with the Framework Development Policy;

Therefore,

- The National Assessment Governing Board staff, with appropriate contractor support and oversight by the Governing Board’s Assessment Development Committee, shall conduct a framework update by establishing a Visioning Panel with a subset of members continuing as the Development Panel, in accordance with the Governing Board Framework Development Policy;
- All processes and procedures identified in the Governing Board Framework Development Policy shall be followed;

- The Visioning and Development Panels will recommend necessary changes in the NAEP Reading Framework at grades 4, 8, and 12 that maximize the value of NAEP to the nation; and the Panels are also tasked with considering opportunities to extend the depth of measurement and reporting given the affordances of digital based assessment;
- The update process shall result in three documents: a recommended framework, assessment and item specifications, and recommendations for contextual variables that relate to student achievement in reading;
- At the conclusion of the NAEP Reading Framework update process, the National Assessment Governing Board shall review recommendations from the Visioning and Development Panels, and take final action on recommended updates to the reading framework, assessment specifications, and subject-specific contextual variables; and
- The framework update adopted by the Board will guide development of the 2025 NAEP Reading Assessment.



Quarterly Report

2025 NAEP MATHEMATICS FRAMEWORK UPDATE

WestEd

November 2018

Contract #91995918C0001

Quarterly Progress Report

Project Overview

In September 2018, the Governing Board awarded a contract to WestEd to conduct an update of the NAEP Mathematics and Reading Assessment Frameworks, Test and Item Specifications, and Contextual Variables. The goal of the first year of the project is to update the mathematics framework documents through the work of a 30-person Visioning Panel, a 15-person Development Panel, and an 8-person Technical Advisory Committee (TAC). This will be accomplished through an initial Visioning Panel meeting, three subsequent Development Panel meetings, conducting outreach efforts to gather public comment on draft versions of the documents, and production of a final updated Assessment Framework, Test and Item Specifications, and Contextual Variables for Mathematics to submit to the Governing Board by July 2019. The NAEP Reading Assessment Framework, Test and Item Specifications, and Contextual Variables will be updated in Year 2 of the project.

The work is to be conducted using a combination of external experts and mathematics specialists within WestEd. WestEd's considerable experience with NAEP comes from having led two previous Framework projects: 1) the update of the 2009 NAEP Science Assessment Framework, and 2) the development of an assessment framework for a new 2014 NAEP assessment in Technology and Engineering Literacy (TEL). To complete this work, WestEd is also partnering with the Council of Chief State School Officers (CCSSO), who will assist in compiling resources for the Framework panels and in securing feedback on the updated framework, test and item specifications, and contextual variables. Input into the framework document update will also come from project collaborators: the National Council of Teachers of Mathematics (NCTM), the National Council of Supervisors of Mathematics (NCSM), TODOS: Mathematics for All (TODOS), and the California Mathematics Project (CMP).

Project Team

Suzanne Wilson, Professor in the Department of Curriculum and Instruction, University of Connecticut will serve as the Mathematics Panel Chair, leading the Visioning and Development Panel activities. The Project Management Team consists of Steve Schneider, Mark Loveland, Ann Edwards, Matt Gaertner, and Kellie Kim. As project director, Steve Schneider will provide day-to-day leadership, guidance, and liaising with the Governing Board. Dr. Schneider has over 40 years of science, mathematics, and technology education experience and led WestEd's two previous Framework development projects. Project co-director, Mark Loveland, and Mathematics Content Expert, Ann Edwards, have oversight for all programmatic activities. Dr. Loveland was project coordinator for the TEL Framework development project, and Dr. Edwards has over 20 years of experience in research, curriculum development, and

professional development in mathematics education spanning elementary to post-secondary levels. Measurement Expert, Dr. Gaertner will support TAC Chair, Guillermo Solano-Flores, Professor of Education at the Stanford University Graduate School of Education. Dr. Kim will serve as Process Manager, facilitating panel meetings and documenting all project activities. In addition, the broader project team includes two mathematics subject matter experts, a project coordinator, and research assistants.

Project Plan

The project plan involves WestEd project management and coordination of panel and TAC activities to update the NAEP Mathematics Assessment Framework, Test and Item Specifications, and Contextual Variables. The framework update deliberations and drafting will be carried out by the Framework Visioning and Development Panels. Comprised of 30 individuals representing various stakeholder groups, the Framework Visioning Panel will formulate guidelines for developing a recommended framework, based on the state of the field. Fifteen members of the Visioning Panel will constitute the Framework Development Panel. The Development Panel is charged with developing the drafts of the three project documents and engaging in the detailed deliberations to determine how to reflect the Visioning Panel guidelines in an updated framework. Dates for the Visioning Panel and Development Panel meetings have been finalized; the Visioning Panel meeting is scheduled for November 7-8, 2018, and the three Development Panel meetings are scheduled for December 5-6, 2018, January 9-10, 2019, and February 12-13, 2019. All meetings will take place in the Washington, DC area.

Preparatory work for the Framework Panel activities has been extensive. WestEd has prepared a Project Plan, which describes the process and schedule for updating the framework documents, and a project Design Document, which serves as the blueprint for the project processes, describing outcomes and metrics, and as the touchstone for quality assurance monitoring.

Using processes outlined in the Design Document, WestEd has worked in consultation with Governing Board staff and Governing Board members to identify a final list of 30 members of the Visioning and Development Panels. To inform the development of a final list of prospective members, the project Management Team, with input from mathematics subject matter experts, constructed a matrix of potential panelists, arranged according to key stakeholder group representation and issues/areas of expertise. Consideration was also given to organizational representation, variables of interest for panelist expertise or background including grade band, teaching experience, geographic region, locale (i.e. urban, suburban, rural), and gender. Additionally, WestEd has identified a final list of 8 technical experts specializing in educational measurement to comprise the TAC. The TAC will respond to technical issues raised during panel deliberations.

The work of the panels and TAC will be informed by an Issues Paper and a compilation of resources. The Issues Paper is intended to serve as a springboard for discussion by the Framework panels and will address issues that are likely to be engaged in the update of the NAEP Mathematics Framework. The Issues Paper and resource compilation will draw from the current NAEP Mathematics framework, specifications, and contextual variables documents, national and international standards, state frameworks and standards, extant assessments, reports, research on mathematics education and

assessment, and other resources. These resources highlight reports, high-level presentations, and associated academic research papers, including an alignment study of NAEP, PARCC¹, Smarter Balanced, and several state assessment frameworks. Using the Issues Paper and documents identified in the compilation of resources, project staff have prepared a presentation and discussion process to use in the initial orientation of the panels to their responsibilities in updating the NAEP Mathematics Framework.

Upon completion of the Framework panel meetings, WestEd will facilitate the actual updating of the Mathematics framework documents, producing draft versions of the Assessment Framework, Test and Item Specifications, and Contextual Variables. Outreach will be conducted primarily by WestEd and CCSSO, with assistance from collaborating organizations. Feedback on the draft documents will come from member organizations represented on the two panels, other organizations, and the public. Organizations may choose to convene meetings, gather feedback via web-based survey, or have members contact a web site. In all instances, the groups will follow procedures for securing input and ensuring representation of diverse views. WestEd staff will tabulate feedback, make recommendations for revisions addressing the feedback, and coordinate the development of final versions of the framework documents, to be submitted to the Governing Board.

Milestones

The major milestones of the project are summarized below.

Milestone	Estimated Timing
Project Kickoff Meeting	09/20/18
Project Plan Development	09/27/18 – 10/07/18
Design Document Development	10/11/18 – 10/24/18
Identification of Visioning and Development Panelists and TAC Members	09/20/18 – 10/10/18
Issues Paper and Resource Compilation Development	09/20/18 – 11/1/18
Visioning Panel Meeting	11/7-8/18
Development Panel Meetings	12/5-6/18 01/9-10/19 02/12-13/19
Convene TAC	Three weeks after each panel meeting and prior to submission of draft framework documents
Draft Versions of Framework Documents	04/19/19
Gather Public Comment	04/22/19 – 06/14/19
Develop Final Versions of Framework Documents	04/19/18 – 06/30/19
Submit Final Framework Documents to Governing Board	07/01/19
Submit Final Process Report	09/16/19

¹ The Partnership for Assessment of Readiness for College and Careers

ASSESSMENT SYSTEMS IN OTHER COUNTRIES

As the Governing Board Technical Services contractor, the Human Resources Research Organization (HumRRO) has developed several resources to inform innovations in how NAEP framework updates are developed and implemented. HumRRO is currently developing a technical memorandum profiling assessment systems in other countries, which will support upcoming framework projects with ideas to consider for frameworks, framework processes, contextual data, and reporting. Art Thacker of HumRRO will brief the ADC on major takeaways from this review.

IMPLEMENTATION OF ADC STRATEGIC VISION ACTIVITIES

The ADC develops recommendations for what NAEP should assess and exercises final authority over all NAEP items. Each framework development and update process uses broadly representative panels of stakeholders to develop detailed recommendations as a draft NAEP assessment framework. Each Board-adopted NAEP framework describes what students should know and be able to do in a subject area and what will be tested on NAEP.

Several activities in the Governing Board Strategic Vision call for ADC's leadership. These projects involve informing educators, updating policies, and exploring new approaches to framework updating, as well as projects to review and update frameworks as needed. A working draft of ADC's project plans is attached, along with a summary of common elements for each framework project. For a detailed timeline of the NAEP Mathematics Framework Update process, see Attachment C.

Ongoing Committee Discussions

Recent ADC discussions have raised several issues for ongoing discussion as the Committee leads Strategic Vision activities and prepares content recommendations for Board deliberation and action:

- The optimal role of NAEP for each content area.
- How Board and Committee priorities should be reflected in upcoming framework updates.
- Expected gains and losses for each NAEP assessment decision.
- Extent to which current frameworks are flexible enough to adapt as needed.
- The level of specificity in assessment results that is most useful to policymakers, researchers, and educators.
- How future NAEP items will be a resource for the field.
- How to establish and maintain partnerships that highlight actionable aspects of results, e.g., teacher access to released NAEP items and contextual information.
- How to develop viable options for new configurations of NAEP assessment content in ways that balance expertise, outreach, research, and trends in curricular standards.
- How to incorporate how other countries think about changing what they assess.
- Whether to more deeply assess an existing content area or add new content areas.
- Whether streamlining of NAEP frameworks is an appropriate goal.
- How to be intentional about content overlap between different assessments, while fulfilling statutory requirements, e.g., biennial reading and mathematics assessment.

WORKING DRAFT* PLAN: ALL ADC STRATEGIC VISION (SV) ACTIVITIES*UPDATES SINCE AUGUST 2018 ARE HIGHLIGHTED*

ACTIVITY	START	FINISH	STATUS
Identify NAEP Resources & Information for Educators (<i>SV #3 Expanding NAEP Resources and SV #6 Contextual Variables</i>)	May 2017	Nov 2021	ADC discussed NAEP Questions Tool and contextual variables in 2017. Suggestions for new or refined NAEP resources can be shared with R&D for Board outreach. To be determined: when/how to develop ADC recommendations.
Update Framework Development Policy	Jun 2017	Mar 2018	ADC began revising policy in Summer 2017. Board discussion continued in November 2017. Board adopted the revised policy in March 2018.
Review & Update Mathematics Framework for 2025 Assessment	Aug 2017	Mar 2025 ¹	State math standards review began in August 2017. Results were shared in May 2018 ADC Framework Review, which also engaged external expert commentary. ADC prepared a framework recommendation for Board action, and it was unanimously adopted in August 2018. The framework contractor ² for the Math Framework Update project was secured in Summer 2018. The Board will review a draft framework when public comment is being collected in Spring 2019. Board action is slated for Summer/Fall 2019, allowing NCES to conduct development leading to a 2025 administration of the updated assessment.
Review & Update Reading Framework for 2025 Assessment	Oct 2017	Mar 2025 ¹	ADC Framework Review was held in March 2018 to inform development of recommendations for a Fall 2019 framework update project launch. In August 2018, the ADC prepared a draft framework recommendation for Board action. Discussion will continue at the November 2018 Board meeting, so the recommendation can be finalized for Board action in March 2019.
Explore New Approaches to Framework Update Processes (also <i>SV #8 International Assessments</i>)	Nov 2017	Aug 2023	The Board's Technical Services contractor is developing several resources to assist in exploring innovations in how NAEP assessment updates are implemented. Framework Update Projects will review other countries' assessment programs to inform frameworks, framework processes, contextual data, and reporting.

* All timelines are estimated. This draft will be updated based on Board policy decisions. All activities address *Strategic Vision Priority #5 Updating Frameworks*, unless otherwise noted.

¹ Timeline includes administering the assessment.

² The mathematics framework project will be implemented by the same contractor as the reading framework project, on staggered schedules so that most of the mathematics project is completed by the time the reading project begins.

WORKING DRAFT* PLAN: ALL ADC STRATEGIC VISION (SV) ACTIVITIES*UPDATES SINCE AUGUST 2018 ARE HIGHLIGHTED*

ACTIVITY	START	FINISH	STATUS
Update Item Development Policy	Aug 2018	Aug 2019	The ADC began discussing goals for the policy revision in August 2018. In Fall 2018, an expert panel will be convened to gather insights from the field regarding best practices in assessment development.
Review & Update Civics, Geography, and U.S. History Frameworks (Depends on NAEP Schedule)	Mar 2018	May 2020	Discussion of outreach began in March 2018, with suggestions to develop options for the ADC to consider. In August 2018, ADC review of the current NAEP item pools indicated that framework revisions did not need to be fast-tracked. Framework reviews will begin in 2019, which will include external expert commentary.
Review & Update Economics Framework (Depends on NAEP Schedule)	Mar 2020	Aug 2021	Depending on ADC recommendations and Board Assessment Schedule decisions, Economics may or may not be a standalone project.
Review & Update Science and Technology & Engineering Literacy (TEL) Frameworks (Depends on NAEP Schedule)	Sep 2020	Nov 2022	Discussion of outreach began in March 2018, Tentative next steps: learn more about standards in NGSS non-adopter states and learn whether stakeholders view that some or all of the TEL subarea on Technology & Society addresses student achievement goals in Civics, Geography, U.S. History, or Economics.
Review & Update Writing Framework (Depends on NAEP Schedule)	Mar 2022	Aug 2023	Initial discussion regarding the Writing Framework in conjunction with the Reading Framework slated for Summer/Fall 2018.
Develop Content Descriptions for the Long-Term Trend (LTT) Mathematics and Reading Assessments (SV #7 Long-Term Trend)	TBD	TBD	March 2018 Executive Committee deliberations on LTT called for ADC to develop content descriptions of the assessments to support LTT item development, as well as updates to the Governing Board LTT policy and improved explanations of LTT assessment goals. ADC requested these descriptions also illuminate knowledge and skills of lower performing students, if possible. NCES has already developed a list of measurement objectives for LTT Mathematics, and similar work may be possible for Reading. Board staff is using these inputs to begin development of the LTT content descriptions.

Common Elements of Each Framework Update Project

Based on the revised [Framework Development Policy](#), several milestones address all NAEP assessment framework projects. Framework update projects engage stakeholders and content experts to identify needed revisions, via subject-specific factors including:

- Evolution of discipline and implications for NAEP frameworks
- Relevance to students' postsecondary endeavors
- Student achievement trends in terms of contextual factors
- Digital-based assessment issues
- International content and measurement trends

MILESTONES: ALL FRAMEWORK PROJECTS

ADC Discussion with External Experts in the Subject Area(s)
ADC Recommendation for Updating Assessment
Board Action on Charge
Framework Contractor Selection
Trend Scan & Resource Compilation
Panel Meetings (3 to 6)
Full Board Review & Public Comment
Framework Draft Finalized
ADC Final Review of Framework
Board Action
Assessment Administered

As a first step, the ADC conducts a framework review, where content experts are invited to a Committee session to provide reflections on the state of the discipline and the extent to which the relevant NAEP framework should be updated. Studies and additional outreach is pursued, as needed, to inform the ADC's recommendation about the type of framework update that is required. Next, the ADC brings its recommendation to the full Board for approval. In the case of an anticipated framework update, the recommendation includes a charge to stakeholders who will serve on the panels convened to draft recommendations for the ADC's consideration.

After Board discussion of the ADC recommendation, the Board will take action on the charge. Concurrently, Board staff will identify a contractor to execute the framework update process.

The framework contractor will launch the project by identifying individuals to serve on the framework panels and by compiling and developing resources to support the meetings of these stakeholders. A subset of these resources will include the Governing Board's charge

to the framework panels as well as documents used to inform the Board's development of the charge. The first meeting of stakeholders will be for the *Visioning Panel* to discuss the major issues to be addressed in the framework. A subset of the Visioning Panel will continue on as the *Development Panel* to develop an updated framework. This panel will also develop the recommended updates to the Test and Item Specifications, as well as the Contextual Variables.

The ADC monitors the framework contractor's work via regular project updates. A draft of the panels' recommended framework will be shared for full Board review and public comment, as well as review by the Board's Committee on Standards, Design and Methodology. This feedback will allow the Development Panel to address concerns and finalize the draft framework, specifications, and contextual variables for the ADC's final review and Board action. The adopted framework, specifications, and contextual variables are given to NCES to begin assessment development, piloting, and finally administration of the operational assessment based on the new framework.

**Assessment Development Committee
Item Review Schedule
June 2018 – May 2019
Updated October 12, 2018**

Review Package to Board	Board Comments to NCES	Survey/ Cognitive	Review Task	Approx. Number Items	Status
12/3/2018	12/21/18	Cognitive	2022 TEL (8 & 12) Pilot Concept Sketches	18	
2/13/18	3/8/18	Survey	2023 Reading (4, 8, 12) Existing Pool Review	TBD	
2/13/18	3/8/18	Survey	2023 Mathematics (4, 8, 12) Existing Pool Review	TBD	
2/13/18	3/8/18	Survey	2023 Science (4, 8, 12) Existing Pool Review	TBD	
2/21/18	3/8/18	Cognitive	2023 Reading (4, 8, 12) Pilot (SBT) Concept Sketch	8-12	
2/21/18	3/8/18	Cognitive	2023 Science (4, 8, 12) Pilot (SBT) Concept Sketch	5-10	
4/17/2019	5/10/2019	Cognitive	2022 Civics (8, 12) Pilot	184-204	
4/17/2019	5/10/2019	Cognitive	2022 Geography (8, 12) Pilot	168-188	
4/17/2019	5/10/2019	Cognitive	2022 U.S. History (8, 12) Pilot	252-272	
5/1/2019	5/24/2019	Cognitive	2022 Economics (12) Pilot	84-104	

NOTE: "SBT" indicates Scenario-Based Task
"DI" indicates Discrete Item.