

National Assessment Governing Board Assessment Development Committee

July 31 – August 1, 2014

AGENDA

Thursday, July 31, 2014		
8:30 am – 4:00 pm	Closed Session ACTION: Science Items and Interactive Computer Tasks (ICTs) <i>Kathleen Scalise, ETS</i>	Secure material sent under separate cover
Friday, August 1, 2014		
9:45 – 9:50 am	Welcome, Introductions, and Agenda Overview <i>Shannon Garrison, Chair</i>	
9:50 – 10:10 am	Discussion on NAEP Writing Assessment <i>Committee Discussion</i>	Attachment A
10:10 – 11:00 am	Update on the 2014 NAEP Technology and Engineering (TEL) Assessment <i>William Ward, NCES</i> <i>Jonas Bertling, ETS</i>	Attachment B
11:00 – 11:50 am	Transitioning to NAEP Technology-Based Assessments in Reading and Mathematics <i>Eunice Greer, NCES</i>	Attachment C
11:50 – 12:15 pm	NAEP and Next Generation Science Standards: A Comparison Study <i>Teresa Neidorf, AIR</i>	Attachment D
12:15 – 12:30 pm	NAEP Item Review Schedule <i>Mary Crovo, Governing Board Staff</i>	

Is The Nation's Report Card "College and Career Ready"?

After nearly a decade of research, the National Assessment Governing Board (NAGB) released in May the first outcomes of its efforts to use the results of the 2013 12th grade National Assessment of Educational Progress (NAEP) to report on the academic preparedness of U.S. 12th graders for college. It found that only 38% of 12th graders meet its preparedness benchmark in reading, and 39% meet its preparedness benchmark in math. NAGB's efforts to track college readiness in the United States is uniquely important as it has the only assessment program that reports on the academic performance of a representative national sample of high school students.

That said, the group that issues the Nation's Report Card deserves a grade of "Incomplete" for its work. Reading and math are obviously necessary indicators of academic preparation for college and careers after high school, but higher education and employers say it's not enough. When it comes to the ability to complete college level work (and to being career ready), writing skills are essential. Yet, despite the fact that NAGB also administers a 12th grade writing test, it inexplicably chose not to include writing as an indicator of readiness.

If NAEP wants to remain the "gold standard" for assessment, NAGB must remedy this situation quickly. Postsecondary institutions and systems throughout the nation assess writing in order to determine whether students have the academic skills to succeed in first year courses. According to ACT, approximately one third of ACT test takers do not meet its readiness standard for English Composition. Recent data from Florida indicates that 32% of first year students are placed into developmental writing courses. Using preparedness indicators that do not include writing will not only provide incomplete information to the public but will send the wrong signal about the importance of writing for high school graduates. And states that assess writing need an independent external benchmark they can rely on, which NAEP has always provided with their reading and math assessments.

Unfortunately, the current NAEP 12th grade writing assessment, starting with the Writing Framework that guides the development of test items, will need substantial revisions to be a valid indicator of academic preparedness. One of the most important advances made through the development of the Common Core State Standards (CCSS) English Language Arts/Literacy standards is the understanding that preparation for both postsecondary education and careers requires the ability to read texts of appropriate complexity and mobilize evidence from the text to make a clear and logical written argument. Achieve's earlier research with states on college and career readiness for the American Diploma Project provides a strong foundation for expecting high school

students to be able to write coherent arguments supported by evidence from credible sources. The CCSS are quite explicit on this issue, building the idea of "writing to sources" into the grade-by-grade progression of the writing standards. Focus groups of postsecondary faculty conducted by PARCC assessment consortium powerfully underscored the importance of these skills.

While NAGB does not need to align its assessments and their frameworks to the CCSS, it does need to pay careful attention to the evidence upon which they rest.

A review of the 2011 NAEP Framework and sample items makes clear that the assessment does not address the ability of students to draw on evidence to make persuasive arguments. In fact, the released 2011 12th grade items do not come close to assessing writing to sources.

One item asks students to write an essay describing how he/she uses technology. It includes a prompt that presents survey data on how students use computers, but doesn't require use of or reference to the data in order to respond to the prompt.

12th Grade NAEP Writing Prompt

Write an essay for a college admissions committee about one kind of information or communications technology you use. Describe what it is and explain why the technology is important to you. Develop your essay with details so the admissions committee can understand the value of this technology. You may use information from the presentation in your essay.

12th Grade NAEP Writing Item

The following article recently appeared in your local newspaper. Write a letter to the local council members arguing for or against the building of Big Discount in your area. Support your argument and defend it against the arguments the opposing side might make.



BIG DISCOUNT

Local council members are considering allowing a store, Big Discount, to move into the community. This large discount retail chain would build a massive new structure in your area. The store would hire hundreds of local workers and provide lower prices than most of the locally owned stores in town.

Residents cannot agree on whether the store should be permitted. "It will bring jobs to this area, and people will not have to go far to do their shopping," says one resident. Another resident disagrees. "It will put local stores out of business," he argues.

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NAGB's web site shows several sample responses, including one that was rated Effective (the highest score), one rated Competent, and one rated Adequate. None of those highly ranked essays made *any* use of the survey data presented in the question. Those data were window dressing. In short, *this item does not require students to read anything (except the question), nor to make an argument based on the evidence provided.*

Another item asks 12th grade students to write a persuasive letter to the local council on whether or not to build a discount store in the area. It too is also of limited value for assessing

preparedness in writing. It asks students to read a contrived "newspaper article" regarding plans to build a store in the community. First, the text is considerably less complex than what 12th graders should be able to handle and even less complex than what would be found in many newspaper stories.

And while students are expected to marshal evidence to support their positions, the sample responses include assertions about evidence and facts, but with no sources cited, and no useful evidence provided in the article students were asked to read. Students could simply make up evidence for their response. That's not the type of preparation for college we should encourage.

If NAGB wants to make a significant contribution to the national conversation about college readiness, it will have to quickly step up its game. Both multi-state assessment consortia, PARCC and SBAC, have developed assessments that incorporate "writing to sources" into their high school assessment programs, and many states will begin to administer them next year.

PARCC 11th Grade Sample Writing Task

Today you will read a biography of Abigail Adams, and then you will read two examples of correspondence between Abigail and her husband, John Adams, who served as President of the United States from 1797 to 1801. As you read these texts, you will gather information and answer questions that will help you understand John and Abigail Adams's relationship and opinions. When you are finished reading, you will write an analytical essay.

Question: *Both John and Abigail Adams believed strongly in freedom and independence. However, their letters suggest that each of them understood these terms differently based on their experiences.*

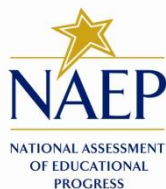
Write an essay that explains their contrasting views on the concepts of freedom and independence. In your essay, make a claim about the idea of freedom and independence and how John and Abigail Adams add to that understanding and/or how each illustrates a misunderstanding of freedom and independence. Support your response with textual evidence and inferences drawn from all three sources.

Sending the right signal to the public and to state policymakers about the importance of assessing writing for college readiness is particularly important now as some states are contemplating buying off the shelf tests or creating their own.

In addition, if NAGB is serious about having a complete indicator of college readiness, they should revise the schedule for administering the 12th grade writing assessment. The last 12th grade writing assessment was given in 2011, and it is not scheduled to be administered again until 2017. Every six years simply isn't enough.

In the decade it took NAGB to conduct its academic preparedness research, states moved rapidly to make college and career readiness the mission of their K-12 systems, and a national priority. Today, every state has adopted college- and career-ready standards in literacy and mathematics, either the CCSS or their own state standards. And, states are working to develop and administer tests that measure college ready skills – and are honored by postsecondary institutions – to high school students statewide. Twenty states have raised course-taking requirements for high school graduation, and many are working to incorporate indicators of college-readiness into their accountability and reporting systems.

In short, the states are way out in front on promoting and assessing college readiness. NAGB doesn't have a moment to waste.



Technology and Engineering Literacy (TEL) Assessment Update

In 2014, the first-ever national NAEP Technology and Engineering Literacy (TEL) assessment was conducted at grade 8 and administered on computers. The 2014 NAEP TEL Framework broadly defines technology and engineering literacy as the capacity to use, understand, and evaluate technology as well as to understand technological principles and strategies needed to develop solutions and achieve goals. This Framework served as the guide for the development of the TEL assessment and defines what students should know and be able to do with technology. As with other NAEP subject-area assessments TEL also includes a survey questionnaire component for students and school administrators. The TEL survey questionnaires capture important contextual factors that relate to achievement and help better understand and interpret the achievement results.

Historically, NAEP has designed its contextual questionnaires around single questions, and questionnaire results have been reported as single questions as well. NCES has suggested changing the approach from questionnaires with only a single question indicator per construct to a balanced approach where indices based on aggregation of several questions are also developed to add more robust policy-relevant reporting elements to the NAEP survey questionnaires.

NAEP survey questionnaire indices will allow for the creation of a more robust database with important contextual variables. These indices will also add value to the Nation's Report Card with potential new reporting elements on additional outcome variables that could serve as a basis for sub-group comparisons, trend analyses, and extended reporting. This approach aligns with the *Policy Statement on NAEP Background Questions and the Use of Contextual Data in NAEP Reporting*, which was unanimously adopted by the National Assessment Governing Board in August, 2012. Further, the approach is similar to the practice applied in international large-scale assessments (e.g., *Programme for International Student Assessment [PISA]*, *Trends in International Mathematics and Science Study [TIMSS]*) or student and teacher surveys (e.g., *Gallup Student Poll*, *Teaching and Learning International Survey [TALIS]*).

In this session, since TEL is the first assessment where the indices approach is being implemented, findings for six potential TEL questionnaire indices (including out-of-school learning and self-efficacy) will be presented supported by data from the 2014 TEL assessment. This session will serve as a basis for the development and discussion of an approach for questionnaire indices not only for TEL but also for future NAEP assessments. Challenges, constraints and decisions points in the process will be outlined. Additionally, NCES will provide an updated timeline for post-2014 TEL administration activities.



Update on Technology-Based Assessments (TBA) White Paper

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

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

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



Update on the Comparison Study of NAEP and the Next Generation Science Standards

The recent release of the *Next Generation Science Standards* (NGSS) in 2013 and the National Research Council (NRC) report on *Developing Assessments for the Next Generation Science Standards* in 2014, is leading to major changes in state curricula and assessments in response to the NGSS emphasis on the integration of scientific and engineering practices with disciplinary core ideas in science. To inform ongoing discussions of NAEP's role in emerging national systems of large-scale assessments in science, technology, engineering, and mathematics (STEM), NCES is conducting a comparison study of NGSS with the NAEP frameworks in technology and engineering literacy (TEL) as well as science and relevant aspects of the mathematics framework. The goal of the study is to provide evidence of the extent to which the STEM frameworks in NAEP are aligned with the content and scientific and engineering practices in the NGSS.

At the last Governing Board meeting in May 2014, AIR provided a presentation to the Governing Board's Assessment Development Committee on plans for the NGSS/NAEP framework comparison study. Since then, an expert panel with experience in NGSS and NAEP was convened and a meeting was conducted in July to provide comparison data on the similarity of content and the alignment of the scientific and engineering practices in the NGSS and NAEP frameworks. At the August ADC meeting, AIR will share some initial outcomes and feedback from the expert panel meeting and provide an update on the status of analysis and reporting plans.

NGSS/NAEP Expert Panel

NAME	AFFILIATION
Alicia Alonzo	Michigan State University College of Education Dept. of Teacher Education
Rodger Bybee	Director, Emeritus Biological Sciences Curriculum Study
George DeBoer	AAAS Director, Project 2061 Washington, DC
Jacob Foster	MA Dept. of Elementary and Secondary Education
Brett Moulding	Director Building Capacity for State Science Education (CCSSO)
Kathleen Scalise	University of Oregon College of Education Dept. of Educational Methodology, Policy & Leadership
Jacqueline Smalls	Education Professional Development Consultant Langley STEM Education Campus DC Public Schools (formerly)