

National Assessment Governing Board
Assessment Development Committee
Report of March 6, 2014

Joint Session with Reporting and Dissemination Committee

10:00 – 10:45 a.m.

Attendees:

Assessment Development Committee (ADC) Members: Chair Shannon Garrison, Vice Chair Cary Sneider, Frank Fernandes, Dale Nowlin, Chasidy White

Reporting and Dissemination (R&D) Committee Members: Vice Chair Rebecca Gagnon, Tonya Matthews, Tonya Miles, Ronnie Musgrove, Anitere Flores

Other Board Members: Board Chair Terry Mazany

Governing Board Staff: Mary Crovo, Michelle Blair, Stephaan Harris, Laura LoGerfo, Anthony White

NCES: Acting Commissioner Peggy Carr, Gina Broxterman, Samantha Burg, Jamie Deaton, Arnold Goldstein, Emmanuel Sikali, Holly Spurlock, Ebony Walton, Bill Ward, Grady Wilburn

Contractors: Jonas Bertling, Jay Campbell, Robert Finnegan, Rebecca Moran, Lisa Ward (ETS); Valerie Marrapodi, Amy Buckley (Reingold); Brian Cramer (Optimal); Alka Arora, Markus Broer, Cadelle Hemphill, Fran Stancavage (American Institutes for Research); David Hoff, Joanne Lim (Hager Sharp); Monica Gribben, Steve Sellman (HumRRO); Connie Smith (Pearson); Edward Wofford (CRP); Fen Chou (CCSSO)

Joint Session with ADC on TEL Reporting

The Reporting and Dissemination Committee and Assessment Development Committee met to review and discuss reporting plans for the NAEP 2014 Technology and Engineering Literacy (TEL) Assessment. Reporting and Dissemination Vice Chair Rebecca Gagnon assumed the role of acting chair for the Reporting and Dissemination (R&D) Committee, because R&D Committee Chair Alonso could not attend the Board Meeting.

Acting R&D Chair Rebecca Gagnon welcomed Assessment Development Committee (ADC) members to the joint session, and ADC Chair Shannon Garrison invited ADC Committee Vice Chair Cary Sneider to introduce the TEL assessment, which was administered in Winter 2014 to a national sample of eighth graders and is planned for release in October 2015.

Mr. Sneider extolled the innovative items in the TEL assessment, especially the digital tasks and the Scenario-Based Tasks (SBT), and the exciting opportunities for rich and innovative reporting therein. He recommended that the R&D Committee collaborate with ADC on reporting and that the 2009 Science Assessment's Interactive Computing Tasks (ICTs) reporting should serve as a model: http://www.nationsreportcard.gov/science_2009/ict_indepth.asp

He explained that, like in the ICT reporting, the TEL reporting website should guide the audience first to complete a sample released item to learn the nature, scope, and meaning of the TEL assessment. Without this direct interaction with the SBTs and the TEL itself, the audience will find the report difficult to understand; reporting a scale score of 150 will not engage visitors. Mr. Sneider also urged members to consider how to facilitate teachers' use of the TEL assessment results and how to extend the report's dissemination beyond the initial release.

Following Mr. Sneider, NCES staff member Emmanuel Sikali presented the draft TEL reporting plan. The current NCES plans offer site visitors an option "...to experience the task as students did..." as the third step in the proposed website. Committee members, led by ADC Committee Chair Garrison, urged NCES to revise this strategy. Echoing Mr. Sneider's concerns, Ms. Garrison and several members noted that if this interactive activity comes too late during users' journey through the report, and TEL Framework information is presented too early, users will fail to perceive the rich and important data from this exciting new assessment.

Thus, the joint committees' preferred structure for the TEL release website is:

- 1) Lead users through completing an item, with visuals;
- 2) Show what skill the item is assessing, the user's score, and students' scores;
- 3) Present student responses and performance (through percent correct, etc.); and
- 4) Highlight links to the TEL Framework and more in-depth data on the assessment

R&D member Tonya Matthews suggested that NCES rework the current plans for the click paths stemming from the release website's landing page. The site instead should offer tailored paths through the website for various audiences, such as those interested in assessment development data, those interested in examining achievement gaps, those interested in trying out the test items, and other perspectives.

After Mr. Sikali outlined the general strategy for TEL reporting, Jonas Bertling of ETS shared information on the new indices from the contextual variables. Relating the TEL assessment results to the contextual variables intrigued the Committee members, who emphatically encouraged a more prominent placement for these analyses in the reporting plans. The TEL assessment aligns well with the new indices on:

- 1) Student self-efficacy;
- 2) In-school learning opportunities for activities in Design and Systems;
- 3) Out-of-school learning opportunities for activities in Design and Systems;
- 4) In-school learning opportunities for activities in Technology and Society;
- 5) Out-of-school learning opportunities for activities in Technology and Society; and
- 6) Information and Communication Technology

The Committee members universally welcomed the bubble charts for each of these six indices and urged Mr. Bertling to present similar charts based on correlational analyses between these indices and subgroup data, especially gender and race/ethnicity. Mr. Bertling expressed concern that these indices are not ready for such reporting. However, the Committee strongly encouraged him to find a reliable and valid means to present correlations between the contextual variable indices and demographic characteristics. Especially considering the focus of TEL, questions about the gender gap as well as differences by race/ethnicity on indices of self-efficacy and interest in technology and society should be spotlighted. Breaking down indices by subgroup is critical to include, as are clearer instructions to accompany the richly informative bubble charts.

Finally, Ms. Matthews urged the R&D Committee as well as NCES to strategize now on how to shape the associations most of the audience will draw between the TEL findings and STEM pipeline issues. In addition, members from both Committees encouraged NCES to tap the reporting potential of the data on students' click streams, time spent on each task, and performance on each of the SBT elements, which especially will benefit educators.

NCES staff discussed next steps, including building a timeline within the context of the provided recommendations. This concluded the joint committee meeting, and the ADC members returned to their conference room.

Assessment Development Committee Meeting

10:50 a.m. – 12:30 p.m.

Attendees:

Assessment Development Committee (ADC) Members: Chair Shannon Garrison, Vice Chair Cary Sneider, Frank Fernandes, Dale Nowlin, Chasidy White

Governing Board Staff: Mary Crovo

NCES: Holly Spurlock, William Ward; Taslima Rahman via teleconference for NAEP/NGSS discussion

Contractors: Jonas Bertling, Jay Campbell, Greg Vafis, Rebecca Moran (ETS); Brian Cramer (Optimal); Alka Arora, Markus Broer, Fran Stancavage, Maria Stephens via teleconference for NAEP/NGSS discussion (American Institutes for Research); Joanne Lim (Hager Sharp); Monica Gribben (HumRRO); Connie Smith (Pearson); Carolyn Rudd (CRP); Fen Chou (CCSSO)

Update on 2014 NAEP Technology and Engineering Literacy (TEL) Assessment

William Ward presented an update on the status of analysis and reporting plans for the TEL assessment. This assessment was administered to a nationally representative sample of 20,000 eighth grade students in January to March 2014. Mr. Ward reported that the analyses have been completed for the overall TEL scale, the three content scales, and the three practice scales, which were defined in the TEL Framework. Summary results will be reported in terms of scale scores and percentiles.

Additional data analyses include disaggregating subscale data, examining contextual question indices, and exploring observable data. This latter category includes student actions or “click-stream” information as the examinees worked through the TEL tasks, and time stamp information showing how long students spent on various parts of the tasks. The current timeline for releasing the TEL report is fall 2015, once the Governing Board sets the TEL achievement levels for Basic, Proficient, and Advanced.

Members expressed their appreciation for the thorough briefing and asked Mr. Ward some clarification questions about the reporting elements. Cary Sneider emphasized that it is extremely important to communicate findings on the scenario-based tasks using accurate language. For example, arguing based on the evidence and understanding the big picture approach to a task are important concepts to communicate. However, efficiency in working through the tasks is not important. ADC members encouraged NCES to refer to the TEL Framework in developing the report, particularly for sections where results from the scenario-based tasks are described and reported.

The ADC teacher members commented on the importance of ensuring TEL results are communicated in meaningful ways for educators. The information should be presented in a very transparent way, with a focus on the tasks and items to illustrate what students can and cannot do related to the TEL content and skills.

NAEP and Next Generation Science Standards (NGSS) Comparison Study

Maria Stephens of AIR briefed the ADC via teleconference on the final report of the NAEP/NGSS comparison study. In previous meetings, the ADC received updates on the report’s progress and had an opportunity to comment on the findings to date. Following the overview of the report findings, ADC members expressed serious concerns about several aspects of the Highlights portion of the report.

While the study authors did a very meticulous job in designing and conducting the study, the ADC expressed disappointment that the study failed to address a very fundamental question—the report does not provide information on the percentage of the NGSS performance expectations and practices represented in the NAEP frameworks. While the Highlights report provides considerable detail on framework-specific comparisons, there is no overall information on the comparison of NGSS to all of the NAEP frameworks examined in the study—science, TEL, and mathematics.

Members noted that the data are all there, but that the report is too fragmented. It is difficult for the reader to determine the major findings of the NAEP/NGSS comparison study based on a reading of the Highlights report. The ADC recommended that the study authors examine the existing data and develop clear, cogent statements summarizing the findings. Cary Sneider noted that it is very important in the final report to distinguish between the distinct and different purposes of the NAEP frameworks and NGSS document. Mr. Sneider explained that the NGSS were developed as the floor for all students in terms of the curriculum, while NAEP frameworks focus on the range of knowledge and skills to be measured by NAEP. These are two very different purposes.

ADC members requested an opportunity to review a subsequent version of the Highlights report, given the numerous concerns they had with the document in its current form.

Discussion of the Governing Board's Strategic Planning Initiative

In preparation for the March 7, 2015 full Board discussion of the strategic planning initiative, ADC members offered the following feedback on the draft ideas. ADC Chair Shannon Garrison will report on these ADC recommendations at the March 7 full Board strategic planning session.

- Acknowledge NAEP's long history of innovation, such as the scenario-based tasks and the transition to DBA.
- Focus on innovation around communication and dissemination of NAEP results and resources. How can we disseminate more effectively and with greater innovation? What are the existing partnerships (e.g., Board member affiliations) and what new partnerships can be developed to promote dissemination?
- Use contextual variables more prominently and in new ways, as part of NAEP reporting. Explore innovations for reporting contextual variables in conjunction with demographic information. NAEP provides contextual information that state assessments do not.
- Report connections of NAEP assessment results to 21st century skills...
- Communicate that testing can be used as a tool. Information from NAEP can serve as a valuable resource for teachers in many areas of instruction and student learning. Illuminate how students learn and how NAEP can serve as a resource to inform instruction.
- Distinguish how NAEP is different from the Common Core assessments. It is important for people to understand the differences. We should address what sets NAEP apart and what connects NAEP to other assessment programs. The Board's Assessment Literacy initiative can help address these issues.

Closed Session**11:30 a.m.-12:30 p.m.****NAEP Digital-Based Assessments: Update on Subject Area Item Development and Issues**

In accordance with the provisions of exemption (9)(B) of Section 552b(c) of Title 5 U.S.C., the Assessment Development Committee (ADC) met in closed session on March 6, 2014 from 11:30 a.m. to 12:30 p.m. to receive a briefing on NAEP's transition to digital-based assessment. This briefing included numerous secure NAEP test questions.

Attendees:

Assessment Development Committee (ADC) Members: Chair Shannon Garrison, Vice Chair Cary Sneider, Frank Fernandes, Dale Nowlin, Chasidy White

Governing Board Staff: Mary Crovo

NCES: Holly Spurlock, William Ward

Contractors: Jonas Bertling, Jay Campbell, Greg Vafis, Rebecca Moran (ETS); Brian Cramer (Optimal); Alka Arora, Markus Broer, Fran Stancavage (American Institutes for Research); Joanne Lim (Hager Sharp); Monica Gribben (HumRRO); Connie Smith (Pearson); Carolyn Rudd (CRP)

Rebecca Moran and Greg Vafis of ETS provided an update on the DBA transition for NAEP assessments. The initial part of the briefing included DBA activities and timelines for the 2017 reading and mathematics transition to a digital-based platform. ADC members had received several prior briefings on the DBA transition for these two subjects at their August and November 2014 meetings. Several changes in the DBA timeline were noted, including the decision to administer the scenario-based tasks in reading and math as a pilot test in 2017 instead of using them as part of the operational assessment and reporting. This decision will allow more time for cognitive labs, which the ADC strongly supports.

The second portion of the closed briefing focused on the DBA transition for the 2018 assessments in civics, geography, and U.S. history. The session presenters highlighted DBA transition issues unique to each subject area in "trans-adapting" the current paper-and-pencil test items to the tablet platform.

Mr. Vafis displayed numerous secure NAEP items to illustrate both challenges and implementation strategies to trans-adapt existing items involving maps, timelines, and other key elements in the civics, geography, and U.S. history item pools. In addition, the DBA environment will allow NAEP to use authentic, interactive stimulus materials for test questions including video clips of speeches, interactive maps, and other formats to measure the broad range of framework objectives.

ADC members discussed various issues related to the civics, geography, and U.S. history assessments and expressed excitement about the potential for DBA questions to test a wider range of critical thinking skills, incorporate online interactive materials, and engage students in the assessment.

I certify the accuracy of these minutes.



Shannon Garrison, Chair

March 24, 2015

Date