



Planned and Potential Innovations for NAEP

November 2021 Quarterly Board Meeting

Background

NAEP has long been considered the “gold standard” of assessments. The Governing Board focuses on policy-setting and oversight, while the National Center of Education Statistics (NCES) develops, administers, and analyzes NAEP. Recognizing their shared stewardship of the Nation’s Report Card, both entities approach changes to NAEP with considerable caution, knowing that **three essential NAEP principles** must be prioritized during any transition:

1. Technical quality, credibility, and trust in the validity of the results must be maintained;
2. Trend lines that allow for comparisons of results from year-to-year and from jurisdiction to jurisdiction must be maintained; and
3. Potential changes to the program should ensure that public dollars are wisely spent while (a) increasing efficiency of the data collection and reporting systems and (b) upgrading the assessment content to reflect 21st century expectations and better understand what American students know across grades and subject areas.

Over the past 20 years, the Governing Board and NCES have successfully implemented several major changes to NAEP:

- In 2001, NAEP began using new testing methods and question types that reflect the growing use of technology in education.
- In 2002, NCES began evaluating the use of a computer-based writing assessment.
- In 2009, NCES began studying Interactive Computer Tasks in science.
- In 2011, the NAEP Writing assessment was the first NAEP test to be administered on digital devices.
- In 2014, the NAEP Technology and Engineering Literacy assessment was first introduced and conducted as a digitally-based assessment.
- In 2015, NAEP mathematics and reading assessments were piloted on digital devices.
- In 2017, NAEP mathematics and reading fully transitioned from paper-pencil to digitally-based assessments (DBA), with other assessments following.

Additional major advancements are now underway: a transition to the **Next Generation eNAEP test platform** and the **modernization of the NAEP Digitally-Based Assessment (DBA) administration model**. NCES has previewed preliminary plans for these transitions in closed

sessions with the Governing Board.¹ NCES will continue to regularly update the Governing Board.

NCES’s current operational plans to modernize the NAEP DBA administration model include the following planned milestones:

KEY MILESTONES		
By 2024:	By 2026:	By 2028/2030:
<ul style="list-style-type: none"> Operationalizing the Next Generation eNAEP platform Transitioning from the current “offline” model to online capability 	<ul style="list-style-type: none"> Transitioning to a device-agnostic approach to NAEP test administration (i.e., schools use their own devices instead of NAEP bringing devices into schools) Moving to “reduced contact” administration of NAEP, in which fewer NAEP-trained personnel would support the test administration 	<ul style="list-style-type: none"> Exploring options for computer-adaptive testing (i.e., multi-stage adaptive but possibly other models) Exploring options for a two-subject design of NAEP to reduce sample sizes by about one third, reduce costs, and maintain technical quality

Given the three essential principles, NCES will carefully phase in these transitions, enabling pilot testing and research/analysis, with the goal of maintaining NAEP’s longstanding trend lines. Based on current plans, each step would be implemented sequentially with a proof-of-concept study and a field test phase before implementing the change operationally.

To further inform NCES’ thinking about **the modernization of the NAEP DBA administration model**, the Institute of Education Sciences (IES), the federal agency within which NCES is housed, has commissioned the National Academies of Science, Engineering, and Medicine (NASEM) to consider how the use of digital technology and other major innovations could transform NAEP over the next ten years and beyond. This NASEM study aims to identify opportunities to substantially reduce NAEP costs while largely preserving its technical quality and informative value. The panel’s report is expected to be issued in winter or spring 2022. The NASEM study may include recommendations that significantly affect or expand upon current NCES operational planning efforts. Once the report is released, the Governing Board should examine its recommendations and consider whether/how to incorporate them into Board policy development. For more information see: [Opportunities for the National Assessment of Educational Progress in an Age of AI and Pervasive Computation: A Pragmatic Vision.](#)

¹ The sessions are closed due to budget implications that affect procurements.

The Governing Board's Role

As the body responsible for setting policy and maintaining oversight of NAEP, the Governing Board will work collaboratively with NCES to:

- Set policy goals for this transition;
- Develop or update Governing Board policies, as necessary, to support successful implementation of this modernization effort; and
- Monitor changes to ensure the trust and credibility of NAEP results are maintained throughout the transition.

Broadly speaking, the Governing Board's policy goals for this modernization effort *may* include:

- Ensuring the modernization efforts balance the need for careful, methodical implementation with the rapid pace of change in technology so that NAEP's DBA administration model can continue to adapt over time.
- Ensuring technological innovations not only improve efficiency but also meet policy and assessment design goals for NAEP.
- Ensuring that the Board can exercise its legislative mandates (i.e., to select the subjects to be tested, to establish assessment frameworks and test specifications, to design the methodology of the assessment, and to develop standards and procedures for regional and national comparisons) per [P.L. 107-279, Title III](#).
- Ensuring this transition—and the cost savings it is intended to achieve—allow for the [Board's policy priorities](#) for the [NAEP Assessment Schedule](#) (i.e., maintain subjects beyond reading and math, increased reporting at the state- and TUDA-level, and increased assessments at multiple grades).
- Maintaining NAEP's trend lines during the modernization of NAEP's DBA administration models.
- Maintaining NAEP's sterling reputation, in terms of technical quality and in terms of credibility and trust in the validity of the results.

In upcoming quarterly meetings, the Governing Board will consider what policy actions should be taken to support the successful transition of NAEP towards these goals. This may include the development of new Board policy and/or updates to existing Board policies (e.g., the [Item Development and Review Policy](#) last updated in 2002). It may also include working with NCES to review recommendations from the NASEM study.

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The Governing Board will hold a plenary session focused on the modernization of NAEP's DBA administration model. This session will include two components:

First, NCES will provide a briefing for the Governing Board on its progress in transitioning to an online, device-agnostic, and "reduced contact" administration model of NAEP. NCES will emphasize key issues that are surfacing in the early stages of implementation and will forecast decisions that will be crucial to the success of this transition.

Second, the Board will host a panel of experts that will share their expertise in transitioning other large-scale assessment programs to online and device-agnostic administration models. The panel will surface key policy issues that the Board should contemplate. These experts include:

- **Tony Alpert, Executive Director of Smarter Balanced**, who will share relevant lessons learned from the multi-state assessment consortium’s implementation of its online, device-agnostic statewide assessments, including how Smarter Balanced has approached comparability of results while maintaining flexibility for states and the interactions between device capabilities and the sophistication of items.
- **Marianne Perie, President of Measurement in Practice**, who will share reflections from working with multiple states and assessment consortia in the implementation of new online assessments, including the potential threats to trend, the potential impacts of different technology devices used by students, and the implications for accessibility and accommodations for students with disabilities and English learners.

In subsequent quarterly Board and committee meetings, members will have the opportunity to engage with other experts with various perspectives relevant to this transition for NAEP—for example, industry leaders and technology experts who can help the Board and NCES think about the impact that the rapid pace of change in technology will have on the current plans; state and local technology directors who can help prepare for the on-the-ground implementation of these modernization efforts; etc.

In preparation for this session, some potential policy questions the Board may want to consider include:

- To what extent might aspects of this modernization effort impact NAEP’s reputation as the “gold standard” in assessment? What approaches can be taken to mitigate potentially negative impacts?
- To what extent might aspects of the modernization effort impact NAEP’s ability to report trend from year-to-year?
- To what extent might aspects of this modernization effort affect NAEP’s ability to report valid and reliable comparisons among states and TUDAs *within* a year?
- How can NCES and the Board prepare the field for the significant transitions inherent in the modernization effort, when a key “selling point” of NAEP to schools is the ease of implementation?
- What assurances are needed regarding the protection of student and data privacy?
- To what extent will the proposed innovations achieve the cost efficiencies to which we aspire? What implications does that have for the long-term priorities of the program?
- What are the implications of this transition on accessibility and accommodations, particularly for students with disabilities and English learners?



Planned and Potential Innovations for NAEP Panelist Biographies

Tony Alpert

Tony Alpert serves as Executive Director for the Smarter Balanced Assessment Consortium, which provides a dynamic system of tools that support teaching success. As Executive Director, he collaborates with Consortium members to ensure that the Consortium's tools for statewide improvement and tools to improve teaching and learning meet the needs of their students, parents and policy makers. Prior to assuming the role of Executive Director, Tony served as Smarter Balanced Chief Operating Officer, where he provided oversight for the financial, assessment, and technical operations of the Consortium. Previously, Tony worked at the Oregon Department of Education where he served in several different roles including managing the state's assessment accountability reporting, managing the allocation of the state's school fund, and finally as the director of assessment. Tony also served on the U.S. Department of Education's National Technical Advisory Committee where he provided technical counsel. Tony earned his master's degree at the University of Oregon.

Marianne Perie

Dr. Marianne Perie is the President of Measurement in Practice, LLC, a small education consulting firm focusing on K–12 assessment and accountability. She currently serves on eight state technical advisory committees, two of which are currently designing an innovative approach to a new assessment. As an extension of the advisory work, she has provided testimony to state legislatures and boards of education, evaluated standard-setting workshops, facilitated task-force meetings, and provided professional development on formative evaluation practices and data literacy. She has designed and directed workshops to draft achievement level descriptors and test blueprints. She has also served on advisory panels for NAGB, the College Board, and AICPA. Her areas of research focus on standard setting, validity theory, comparability of large-scale assessment, interim assessment, and alternate assessment for students with the most significant cognitive disabilities. Previously, she was the Director of two educational research centers at the University of Kansas, overseeing two state operational assessment programs, one career pathway assessment, and several grants. Prior to joining KU, she was a Senior Associate with the National Center for the Improvement of Educational Assessment, providing technical assistance to 16 states on accountability and assessment issues related to Federal policy. In her early career, she worked on multiple state and district assessments, the National Assessment of Educational Progress (NAEP), and international assessments as an employee of the Educational Testing Service and the American Institutes for Research.