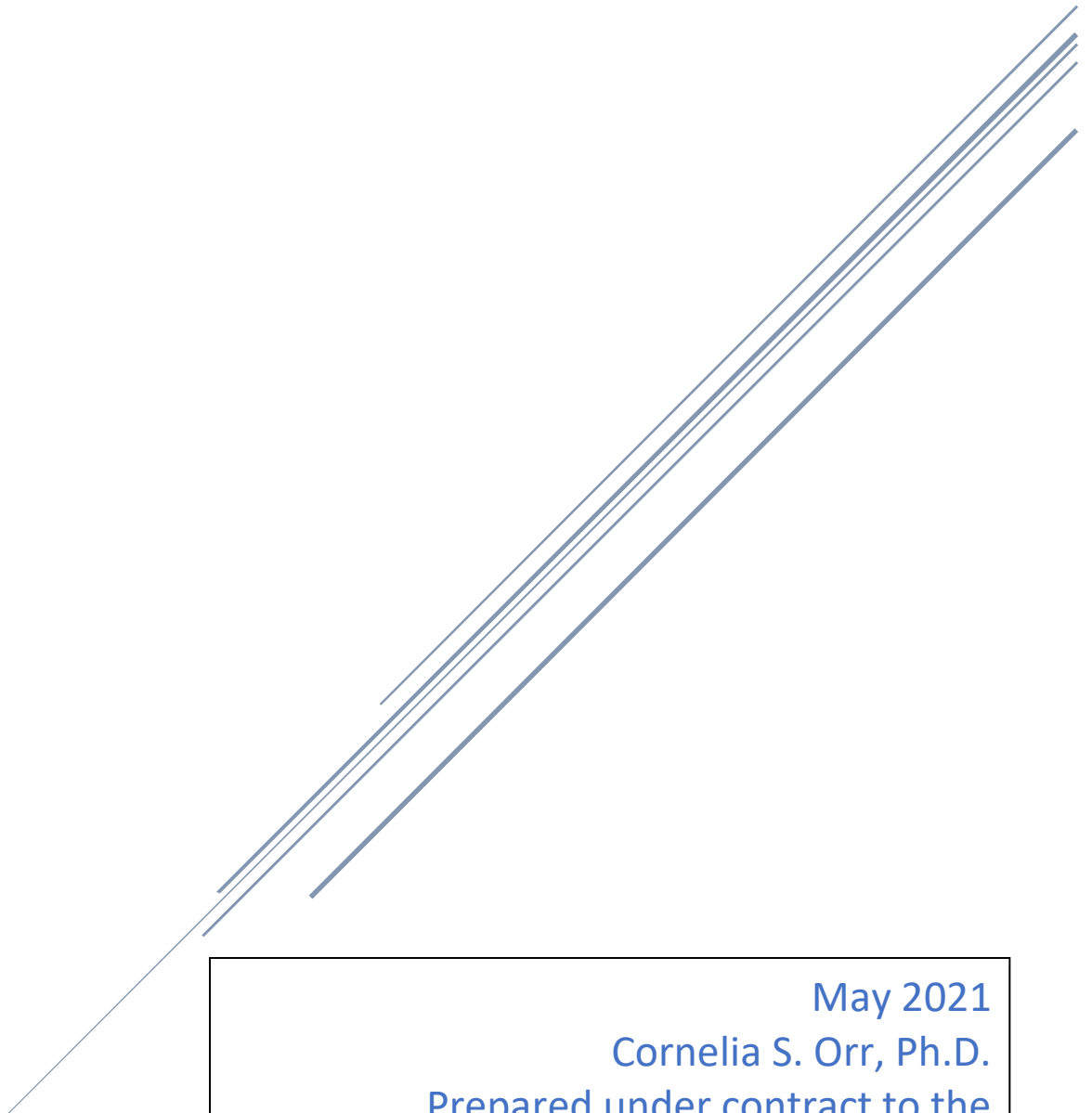


HISTORY, POLICY, AND DECISION POINTS

Developing NAEP Assessment Frameworks



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History, Policy, and Decision Points for Developing NAEP Frameworks

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I. Introduction and Historical Overview

The National Assessment Governing Board (Governing Board) is an independent, bipartisan organization that sets policy for the National Assessment of Educational Progress (NAEP), commonly known as The Nation's Report Card. Since its creation by Congress in 1988, the Governing Board has overseen and set policy for NAEP by identifying subjects to be tested, determining and approving the assessment content, setting achievement levels for each assessment (i.e., NAEP *Basic*, NAEP *Proficient*, and NAEP *Advanced*), improving the reporting of results, and planning and executing initial releases of NAEP Report Cards.

The 26 members of the Governing Board include governors, state legislators, state and local school officials, educators, researchers, business representatives, and members of the general public, who are appointed by the U.S. Secretary of Education. As part of the Governing Board's policy-setting role, it adopts policy statements and resolutions for NAEP which provide guidance about the implementation of NAEP to persons and organizations working with and on behalf of the Governing Board. The Governing Board's policies align with the purpose of NAEP to provide fair and accurate measurement of student academic achievement. Members of the Governing Board and the National Center for Education Statistics (NCES), working in tandem, conduct activities to implement NAEP and communicate NAEP results to diverse audiences.

This paper provides a summary of the history of the Governing Board framework development processes and the evolution of the policy that now governs how the Governing Board determines the content for NAEP. It explains how changes have occurred over time and the implications for current and future framework development. This paper also describes key decision points in this process, for example, when the Board involves external partners and stakeholders in updating or revising frameworks, and describes the Board's role in approving frameworks.

What Is a NAEP Assessment Framework?

In the 2009 publication *A History of NAEP Assessment Frameworks*, Carol Jago provides this definition:

NAEP frameworks describe the assessment objectives and design for national tests in reading, mathematics, writing, science, history, civics, economics, foreign languages, geography, and the arts. Governing Board policy dictates that these assessments must be valid, reliable, and based on widely accepted professional standards. (Jago, 2009, p. 1)

NAEP assessment frameworks "are conceptual, overview documents that lay out the basic structure and content of a domain of knowledge and thereby serve as a blueprint for assessment development." (Haertel, et al., 2012, p. 14) Framework documents typically define the content area in two dimensions: (1) the content and skills to be tested, and (2) the cognitive processes and complexity assessed within the content area. Further, the framework specifies

the types of test questions to be used and the balance of content (weighting) to be assessed. More specific details about developing items to measure the content and cognitive processes at differing levels of cognitive complexity are contained in a companion “specifications” document for each framework. NAEP assessment frameworks provide both the “what” and the “how” for NAEP and have been used by the Governing Board since its inception in 1988.

NAEP before the Governing Board

Since the initial administration of the NAEP in 1969, much has changed in the education landscape and the assessment itself. In the early years, the assessment was developed to provide content-specific information useful to educators. The NAEP reports were designed to provide data on the success levels on a task (percent correct) and not an overall score. Summary scores were avoided because there were concerns about federal government intrusion into state and local school district decisions about education. (Lehmann, 2004; Selden, 2004) Similar concern exists today and probably always will.

In 1969, the responsibility for implementing the national assessment was given to the Education Commission of the States (ECS)—an organization of state leaders that could be “trusted” not to infringe on the rights of its members. While this arrangement continued successfully for several years, a 1976 government report issued by the Comptroller General contained a plea to “make NAEP more useful.” (U.S. General Accounting Office, 1976) New federal legislation in 1978 brought changes to the oversight and organization of NAEP and established an Assessment Policy Committee of 17 members (the precursor to the Governing Board). In 1982, a major study critical of NAEP was published which said NAEP was underdeveloped and underutilized, and of “apparently negligible influence.” (Wirtz & Lapointe, 1982)

In 1986, then Secretary of Education William J. Bennett formed a distinguished group of state leaders, called the Alexander-James study group. The group questioned the narrow range of subjects that NAEP was covering—due mainly to inadequate funding. Their report was reviewed by the National Academy of Education, and their review was incorporated in the report prior to publication. (Alexander & James, 1987) The debate which followed resulted in revised legislation and more changes for NAEP. The 1988 reauthorization of NAEP not only created the National Assessment Governing Board, it gave the Board specific responsibilities in regard to NAEP. One of these responsibilities was determining what would be assessed and how.

Anticipating the 1988 legislation that would permit voluntary state participation in NAEP, the National Assessment Planning Project (NAEP, 1988, pp. 5-6) was established to make recommendations for the 1990 mathematics assessment. The project utilized a process for developing objectives similar to that described in the legislation which authorized NAEP through June 30, 1988. However, it was expanded to ensure careful attention to formal mathematics objectives of states and some local school districts, and to elicit the opinions of practitioners at the state and local level about the content that should be assessed. This

involvement was seen as a key component to encourage the participation of states, particularly given that NAEP would produce state report cards. The effort to identify and review the objectives provided the assurance states wanted about the content being assessed. (Selden 2004, pp. 195-199)

1987-1990 Overlap: NAEP and the Governing Board¹

The first assessments administered after the 1988 establishment of the Governing Board were in reading and mathematics in 1990. Those assessments utilized the NAEP reading and mathematics objectives being developed in anticipation of the 1988 law. These objectives were developed and reviewed as part of the NAEP National Assessment Planning Project. The 1990 NAEP Mathematics Framework and Reading Framework were published in November 1988 and April 1989, respectively, by Educational Testing Service (ETS) on behalf of NAEP. (NAEP, 1988; NAEP, 1989)

The development of the frameworks utilized a consensus development process. The 1988 Mathematics Framework described these elements. (NAEP, 1988, pp. 6-9)

- A seventeen-member Steering Committee included policy makers nominated by national organizations. One member was also on the Mathematics Objectives Committee.
- An eleven-member Mathematics Objectives Committee, comprised of a teacher, a school administrator, mathematics education specialists from various states, mathematicians, parents, and citizens, recommended objectives for the assessment.
- The draft objectives were distributed to the mathematics supervisor in each of the 50 states and also to 25 mathematics educators and scholars for their review.
- Incorporation of comments and revisions were made by the Mathematics Objectives Committee with the final recommendations approved by the Steering Committee.
- After the objectives were submitted to NCES, they were provided to the Assessment Policy Committee which approved the Project recommendations.²

Because NAEP would now produce state report cards, both the reading and mathematics process to develop objectives paid careful attention to the formal objectives of states and to the opinions of practitioners at the state and local level. In particular, efforts were made to integrate new theory and research on the learning and teaching of these subjects and to reflect the innovative approaches of assessments being developed. (NAEP, 1989, p. 7)

¹ A more detailed presentation of the historical activities related to the history of NAEP and the Governing Board is found in Appendix A.

² The Assessment Policy Committee provided policy oversight for NAEP and was established in the 1978 NAEP reauthorization. Also see discussion on page 2 and Appendix A.

The Governing Board Framework Development Policy Overview

Beginning with assessment frameworks adopted for the 1992 assessment, Governing Board staff managed the process of soliciting and engaging contractors, and overseeing the work of committees charged with identifying the content for the assessments. A Governing Board staff member attending the second meeting of the Governing Board observed, "One of the most important issues considered at the January 1989 meeting was developing a 'consensus process' for determining the content of the 1992 reading assessment." (Bourque, 2004, p. 205) The development of the framework was to be carried out via a contract with the Council of Chief State School Officers (CCSSO). The CCSSO staff recommended the principles summarized below which were contained in the January 1989 Governing Board meeting materials.

1. The process should be participatory, visionary, iterative, structured, explicit, stable, and supported by adequate resources.
2. The management of consensus committees should be in a value-free way, to encourage opinions and avoid curtailing or intimidating the participants.
3. The process should be mutually educational for those involved.
4. Values and constraints for the process should be stated up front.
5. Changes in the structure or rules of the consensus process during the process must be avoided.
6. Solicitation of comments representing the field is needed only in response to the draft recommendations.
7. Board members must decide carefully with which people they will work.
8. Work on subject-matter objectives, procedural, and analytic plans should be a staff function of the governance process, and review by the field should be part of the process.
9. The consensus process should be self-evaluating.
10. The planning process should have a built-in buffer to ensure that the recommendations are thoughtful and appropriate.

Bourque, the Governing Board Assistant Director for Psychometrics from 1989 to 2001 and an observer of the consensus processes for reading, writing, U.S. history, world geography, science and civics indicated these 10 principles were "in large measure what govern the work of the groups" who make the framework recommendations. (Bourque 2004, p. 206) The CCSSO report at the January 1989 meeting also included the recommendation that the Governing Board develop an explicit policy to direct those developing objectives for NAEP. When one considers the Governing Board workload to adopt frameworks between 1989 and 2002³, it is not surprising that the explicit policy did not emerge until 2002. It is reassuring that similar practices as those ultimately included in the 2002 Framework Development Policy were in place before they were codified.

³ The Governing Board adopted the following frameworks between 1989 and 2002: Reading (1990), Writing (1990), Science (1991), U.S. History (1992), Geography (1992), Arts (1994), Civics (1996), Writing (1996), Mathematics (2001), Foreign Language (2000), Economics (2002).

In 2018, the Governing Board revised the Framework Development Policy, primarily to add a provision for updating frameworks when a complete framework revision was not needed. The policy had originally been conceived for the development of new frameworks. This revision also included streamlining some wording and moving procedural details to the contracting documents called statements of work. Details about these revisions will be discussed in a later section.

II. Legal Requirements for Assessment Frameworks

Are “Frameworks” Required in the Law?

Technically, no. The current and previous versions of the Congressional authorization do not use the term “framework.” ‘Assessment framework’ is a construct used to distinguish what will be tested from what is taught (curriculum standards or instructional objectives). Some assessment programs use the term “test blueprint” or “test specifications.” While the construct of an assessment framework is not unique to the Governing Board, it is the term that was chosen. The NAEP assessment frameworks do not cover every aspect of a content area, especially what students should be taught and how; they simply describe which aspects of the content area will be tested on NAEP and how that content will be assessed.

By implication, yes. The NAEP legislation in effect just prior to the establishment of the Governing Board in 1988 included the requirement that the content to be assessed be defined. Specifically, the law required that “each learning area assessment shall have goal statements devised through a national consensus approach, providing for active participation of teachers, curriculum specialists, subject matter specialists, local school administrators, parents and members of the general public.” (NAEP, 1988, p. 6) This process was used to develop the content-by-process matrix used for the assessments prior to the 1988 legislation, which are now largely referred to as the Long-Term Trend assessment (Mullins, 2017). The language related to assessment content in the current congressional authorization (P.L. 107-297, 2002) does not use the term “framework,” but it has similar meaning.

What are the Legal Responsibilities of the Governing Board?

The responsibilities for the Governing Board as defined in the authorizing legislation (P.L. 107-297) are about more than developing assessment frameworks for NAEP. In Table 1 below, all of the requirements of the law are listed for clarity with the **distinctly framework-related ones shown in bold**. It should be noted that P.L. 107-279 is also about more than the Governing Board. It provides authorization for both the Governing Board (Section 302) and NAEP (Section 303). One requirement in Table 1 (No. 8) is from Section 303 and is included because it has implications for the policies and work for which the Governing Board is responsible. Also, references to Section 303 are found throughout Section 302 in acknowledgement of the necessity to coordinate all aspects of NAEP. While the requirements for the Governing Board in

Table 1 are organized into an easier-to-read list than is typical of presentations of laws, the correct legal citations are provided in brackets after each item.

<p>Table 1 Legal Responsibilities of the Governing Board from P.L. 107-279 (Emphasis added for distinctly framework-related responsibilities)</p>	
<p>1. There is established the National Assessment Governing Board which shall ...” [Section 302(e)(1)]</p> <ul style="list-style-type: none"> i. formulate policy guidelines for the National Assessment (carried out under section 303). [Section 302(e)(1)(A)] ii. select the subject areas to be assessed (consistent with section 303(b)); [Section 302(e)(1)(B)] iii. develop appropriate student achievement levels as provided in section 303(e); [Section 302(e)(1)(C)] iv. develop assessment objectives consistent with the requirements of this section and test specifications that produce an assessment that is valid and reliable, and are based on relevant widely accepted professional standards; [Section 302(e)(1)(C)] v. develop a process for review of the assessment which includes the active participation of teachers, curriculum specialists, local school administrators, parents, and concerned members of the public; [Section 302(e)(1)(D)] vi. design the methodology of the assessment to ensure that assessment items are valid and reliable, in consultation with appropriate technical experts in measurement and assessment, content and subject matter, sampling, and other technical experts who engage in large-scale surveys; [Section 302(e)(1)(E)] vii. consistent with section 303, measure student academic achievement in grades 4, 8, and 12 in the authorized academic subjects; [Section 302(e)(1)(F)] viii. develop guidelines for reporting and disseminating results; [Section 302(e)(1)(G)] ix. develop standards and procedures for regional and national comparisons; x. take appropriate actions needed to improve the form, content, use, and reporting of results of any assessment authorized by section 303 consistent with the provisions of this section and section 303; [Section 302(e)(1)(I)] and xi. plan and execute the initial public release of National Assessment of Educational Progress reports. [Section 302(e)(1)(J)] 	
<p>2. The National Assessment of Educational Progress data shall not be released prior to the release of the reports described in subparagraph (J). [Section 302(e)(1)]</p>	
<p>3. The Assessment Board may delegate any of the Assessment Board's procedural and administrative functions to its staff. [Section 302(e)(2)]</p>	
<p>4. The Assessment Board shall have final authority on the appropriateness of all assessment items. [Section 302(e)(3)]</p>	
<p>5. The Assessment Board shall take steps to ensure that all items selected for use in the National Assessment are free from racial, cultural, gender, or regional bias and are secular, neutral, and non-ideological. [Section 302(e)(4)]</p>	
<p>6. In carrying out the duties required by paragraph (1), the Assessment Board may seek technical advice, as appropriate, from the Commissioner for Education Statistics and other experts. [Section 302(e)(5)]</p>	
<p>7. Not later than 90 days after an evaluation of the student achievement levels under section 303(e), the Assessment Board shall make a report to the Secretary, the Committee on Education and the Workforce of the House of Representatives, and the Committee on Health, Education, Labor, and Pensions of the Senate describing the steps the Assessment Board is taking to respond to each of the recommendations contained in such evaluation. [Section 302(e)(6)]</p>	

Table 1 Legal Responsibilities of the Governing Board from P.L. 107-279 (Emphasis added for distinctly framework-related responsibilities)	
8.	Such agreement (with the Secretary to participate in state assessments) shall contain information sufficient to give States full information about the process for decision-making (which shall include the consensus process used), on objectives to be tested, and the standards for random sampling, test administration, test security, data collection, validation, and reporting. [Section 303(b)(3)(B)(II)]

Have the Legal Requirements for Frameworks Changed Over Time?

The duties of the National Assessment Governing Board were initially authorized in the legislation establishing the Board in 1988 and have remained quite stable throughout periodic reauthorizations, the latest of which is P.L.107-279 (2002). This law provides authorization for both the Governing Board (Section 302) and NAEP (Section 303).

In each iteration of the law the subsections have been rearranged slightly and language was added, deleted or clarified. The requirements, however, have remained essentially the same. Two unique elements were added in 2002. The first was Section 302(e)(1)(D), [No. 1.v. in Table 1], which calls for an inclusive review process for the assessment that is now addressed both by a Governing Board policy (NAGB, 2002i)⁴ and by the framework review/revision process involving panels of experts and the solicitation of public comments before each framework is adopted. The other addition was Section 302(e)(1)(F), [No. 1.vii. in Table 1], which provides a linkage to Section 303 – the NAEP section. Appendix B presents all of the legal requirements in a side-by-side arrangement. Each requirement is presented with the legal numbering used in each reauthorization and identifies changes that occurred in each revision.

III. Board Policy Work Impacting Assessment Frameworks

This section of the report takes a broad look at the policy work of the Governing Board and how these efforts have influenced the development of NAEP Assessment Frameworks and the Framework Development Policy.

Before the Governing Board Framework Policy

As noted previously, the 1990 NAEP Mathematics and Reading Frameworks were the first frameworks issued after the Board’s establishment. These objectives initially were developed and published (1988 and 1989 respectively) under the NAEP National Assessment Planning Project. The project, just like NAEP in prior years, used the accepted professional practices for test development. However, this project was more political than previous NAEP assessments

⁴ The Governing Board policy statement, *Review of the National Assessment of Educational Progress*, adopted August 3, 2002, included six guiding principles that describe expectations for the rigorous review of the National Assessment of Educational Progress and actions of the Governing Board.

had been. That is, the opinions and endorsements of local and state education leaders became more important than ever before. As objectives-based assessments had grown in the states throughout the 1970's and 1980's, these leaders wanted to be sure that the NAEP assessments covered the content they considered important and that it was tested in ways they thought appropriate. Of course, NAEP had always considered the advice of the subject area experts, but the advent of state report cards heightened NAEP's importance to states and resulted in more scrutiny for the assessments. These leaders wanted to ensure that what was tested would be reflective of the essential content being taught in their schools.

Historical Processes Impacting Governing Board Policies

The Governing Board became an operational entity in October 1988 with six members from the existing Assessment Policy Committee and other members appointed to staggered terms by Secretary of Education William J. Bennett in September 1998. (Vinovskis 1998, p. 20) The first Board meeting occurred on November 18–19, 1988, just seven weeks after the law went into effect. Some of the first activities included hiring staff, establishing a way of work (adopting by-laws), and planning for the 1990 Reading and Mathematics Assessments. Two working groups (organizational and policy) were formed at the very first meeting of the National Assessment Governing Board, and work was begun to develop by-laws which were adopted a year later.

The early years of the Governing Board were spent addressing the responsibilities contained within the authorizing legislation, including plans for reporting, setting achievement levels, and preparing frameworks. Assessment frameworks were adopted in 1990, 1991, 1992, 1994, 1996, 2000, and 2001. The *Redesigning the National Assessment of Educational Progress Policy Statement* (NAGB, 1996) was adopted at a time when Congress had codified National Education Goals, and it was the expectation that the NAEP would be a primary means for monitoring progress in student achievement. The new National Education Goals called for more subjects to be assessed than in the past and, not surprisingly, assessment frameworks were addressed throughout the policy. Although the legislation has now been replaced by the *No Child Left Behind Act of 2002* (P.L. 107-097), some of the principles in that policy remain (e.g., inclusive process and stable frameworks).

The greatest impact on Governing Board policy development was the *No Child Left Behind Act of 2002* (P.L. 107-097). That year was very busy and many policies were codified, including the *Framework Development* and *Item Development and Review* policies.⁵ In his letter to Board

⁵ Governing Board policies codified after the passage of the *No Child Left Behind Act of 2002* included: *NAEP and the No Child Left Behind Act* (NAGB 2001b), *Framework Development* (NAGB 2002a), *Item Development and Review* (NAGB 2002b), *Long-term Trend* (NAGB 2002c), *Plan for Study of NAEP Sampling* (NAGB 2002d), *Policies and Procedures for Complaints Related to the National Assessment of Educational Progress* (NAGB 2002e), *Prohibition on Using NAEP to Influence State and Local Standards, Tests, and Curricula* (NAGB 2002f), *Public Access to Test Questions, Item Release, and Confidentiality of Data for NAEP* (NAGB 2002g), *Resolution on Participation of the Commonwealth of Puerto Rico in NAEP* (NAGB 2002h), and *Review of the National Assessment of Educational Progress* (NAGB 2002i).

members about the August 1-3, 2002 meeting, then Executive Director, Roy Truby, summarized these actions in the selected quotes which follow.

Actually, the Governing Board's work on No Child Left Behind began more than a year ago at the Board's special meeting in Houston on June 28, 2001. It was then, ... adopting the design changes that make it possible for 2003 to be the base year for the mandatory state NAEP. ... At the March and May meetings, the Board adopted a new schedule of assessments, eight new policies, several changes in its by-laws, and one white paper to implement the law. At this meeting, three more policies and a study plan have been prepared for Board action. (NAGB, 2002)

A more complete history of the early days of the Governing Board can be found in the resource *Overseeing the Nation's Report Card* (Vinovskis, 1998).

Ongoing Governing Board Policy Work

Governing Board policies have operationalized the requirements in the law. They have, for example, determined how the work of setting achievement levels would be completed. Governing Board policy work is an ongoing activity and will require the attention of Board members and staff again and again.

Governing Board policies have been responsive to the law, but specific policies have not been required by the law. The need for a policy is solely determined by the Governing Board. As mentioned earlier, the *Redesigning the National Assessment of Educational Progress* policy included guidance related to framework development which is still being used today. The excerpts below are examples of Governing Board decisions to codify in policy topics that are not explicitly required in the law.

Test frameworks and test specifications developed for NAEP generally shall remain stable for at least 10 years.

In rare circumstances, such as where significant changes in curricula have occurred, the Governing Board may consider making changes to test frameworks and specifications before 10 years have elapsed.

NAEP shall be designed so that others may access and use NAEP test frameworks, specifications, scoring guides, results, questions, achievement levels, and background data. (NAGB, 1996, pp. 14-16)

The Governing Board does continue to update policies. Recent examples, in addition to *Framework Development Policy*, are the *Reporting, Release, and Dissemination of NAEP Results*

Policy Statement (NAGB, 2017a) and the policy on *Developing Student Achievement Levels for the National Assessment of Educational Progress* (NAGB, 2018c).⁶

Some policies originally established in 2002, such as the Framework Development Policy, have been updated but others have remained intact and are still relevant today. A primary example is the policy on the *Prohibition on Using NAEP to Influence State and Local Standards, Tests, and Curricula* (NAGB, 2002f). The law gave this admonition, but the Governing Board decided to codify its position in a policy.

Influence of Professional Standards

Implementing NAEP and Governing Board policy is not done in a vacuum. External influences such as changes in the content standards of professional organizations or the instructional practices for a content area are a consideration when developing or revising frameworks. For example, changes were made in the 1996 Mathematics Framework “which would better align the NAEP program in mathematics with the National Council of Teachers of Mathematics Standards (NCTM, 1989) and the Professional Standards for Teaching Mathematics (NCTM, 1991).” (NAGB, 1992, p. 2) Another example was the nationwide emphasis on the preparedness of high school graduates for the workplace and college. A review of the mathematics and reading assessment frameworks was conducted and changes were made. (Achieve, 2005; Achieve, 2006)

There are also professional standards in the field of tests and measurements, known as psychometrics. As the Governing Board has developed policies, the staff and contractors have worked to adhere as closely as possible to these standards and also to the statistical standards of the National Center for Education Statistics. Both editions of the Framework Development Policy make reference to the following standards. The 2018 edition of the policy states it this way. (NAGB, 2018b)

This Policy complies with the National Assessment of Educational Progress Authorization Act of 2002 (P.L. 107-279) and the documents listed below which express widely accepted technical and professional standards for test development. These standards reflect the agreement of recognized experts in the field, as well as the policy positions of major professional and technical associations concerned with educational testing.

The Standards for Educational and Psychological Testing. (2014). Washington, DC: American Educational Research Association, American Psychological Association, and National Council on Measurement in Education.

⁶ Ongoing work on updating the *Item Development and Review Policy* (NAGB, 2002b) and the *NAEP Testing and Reporting on Students with Disabilities and English Language Learners Policy* (NAGB, 2010, 2014) has been severely impacted by the restrictions the COVID-19 Pandemic has imposed on the Governing Board and others across the country who would have participated.

Code of Fair Testing Practices in Education. (2004). Washington, DC: Joint Committee on Testing Practices.

Center for Education Statistics (NCES) Statistical Standards. (2012).

These standards emphasize features of tests including, for example, the content to be assessed and the statistical information that should be provided about test items and tests as a whole. If these standards are updated, the Board must work to address any new components that are applicable to NAEP and update the Governing Board policies, practices, and procedures, as may be needed. Contractors are expected to implement framework development projects in a manner that honors and is congruent with these standards. The requirements document for the most recent frameworks procurement describes the procedures expected of contractors so that an assessment consistent with the standards will be implemented. (NAGB 2018a)

One challenge should be noted. The documents cited above focus primarily on the assessment and reporting of individual student scores. NAEP does test individual students but does not report individual scores. Thus, the professionals working in these areas must interpret how these standards are intended to apply to the unique situation of NAEP. While these standards are updated from time to time, it is infrequent. The most recent editions emphasize collecting many types of validity evidence so that the validity claims of an assessment can be supported. Validity has always been important to NAEP and the Governing Board, and to the organizations which have evaluated NAEP. (National Research Council, 1999; Buckendahl, et.al., 2009; National Academies of Sciences, Engineering, and Medicine, 2017) Therefore, collecting validity evidence for NAEP and implementing other applicable portions of the standards will continue to be an important consideration for the Governing Board. In this regard, the Board examines the overlap between the NAEP framework and the standards used by other organizations and states. Recently, comprehensive reviews of state standards were conducted for mathematics and science. (AIR, 2018a, 2018b, 2018c, 2018d; HumRRO 2021)

IV. Board Policy for Framework Development

This section of the report focuses on the Governing Board Framework Development Policy, its origins, components, and changes over time. In addition, a list of Board decision points for framework development are presented.

2002 Framework Development Policy

The first Framework Development Policy was adopted on May 18, 2002. (NAGB, 2002a) As described earlier, the framework development activities conducted from 1988 to 2002 utilized processes similar to those codified in 2002. In particular, an iterative process was followed that used committees of content specialists from the field, a consensus process, opinions solicited from stakeholders, and the involvement of the Governing Board. The intent of the Assessment

Development Committee (ADC) to incorporate similar guidance into the policy is manifest in their March 1, 2002, meeting minutes. (NAGB, 2002i)

... the Executive Committee delegated this issue to the ADC since it involved the area of framework development and item review. ADC members discussed the current Board practice of "casting a wide net" to have broad representation on the framework development panels. The new policy language should make this explicit, perhaps by setting targets for representation of various NAEP constituencies. Strategies for involvement and feedback from the general public should also be stipulated. A draft policy will be prepared for discussion at the May Board meeting. (NAGB, 2002j)

At the May 2002 meeting, the Governing Board reviewed the policy ADC recommended for adoption. The ADC minutes of that meeting found in the August 2002 Board materials contain the following statements.

This policy was reviewed and discussed in detail at the ADC's April 29 meeting in Detroit, Michigan. Committee members had no further changes to the draft policy. Action Item: The Assessment Development Committee recommends Board approval of the Policy on Framework Development. (NAGB, 2002k)

After receiving the ADC report and recommendation, the first Framework Development Policy was adopted. (NAGB, 2002a) The purpose of establishing this policy was to incorporate the requirements of the authorizing legislation and professional best practices into an official policy that provided explicit guidance for Governing Board staff and contractors to follow in framework development projects. The original 2002 policy was organized around seven principles with additional guidance about how to implement each of the principles. Simply stated, the policy provided for the following:

Principle 1 – the definition of a framework and what is to be included

Principle 2 – the process and participants for developing the frameworks

Principle 3 – the inclusion in the review process of current theory and practice standards within the discipline as defined by a variety of organizations

Principle 4 – the role of the Governing Board in approving the framework and the role of its designees including committees, staff, and contractors that might be hired by the Governing Board, and the required documents to be presented to the Board for approval

Principle 5 – the inclusion of preliminary achievement level descriptions and intended uses of them

Principle 6 – specific instructions, to be used by others, for the design of the test and constructing items

Principle 7 – the expectation that frameworks would remain stable for at least 10 years

2018 Framework Development Policy

In 2018, the Governing Board made a revision to the 16-year-old Framework Development Policy. (NAGB, 2018b) In addition to some minor reorganization and rewording, primary distinctions between the 2002 and 2018 editions included four changes that will be discussed in this section: (1) updating frameworks, (2) reviewing frameworks, (3) participants/stakeholders, and (4) framework panels/committees. Additionally, the current policy maintains a focus on the overarching principles to be followed, with the details and procedures moved to procedural documents and requirements for contractors. (NAGB, 2018a)

This section first describes the general contents of the 2018 policy and subsequently provides more detail about the four changes mentioned above. The two versions have similar content, although they are arranged somewhat differently. Appendix C contains a more detailed comparison of the policy principles for both versions in a side-by-side display. Although Appendix C does not capture all of the edits which occurred to remove redundancy and procedures, it does provide some examples of the specific wording changes.

The 2018 policy was organized around six principles, each containing additional guidance about how to implement the principle. Simply stated, the policy provides for the following:

Principle 1 – Elements of Frameworks: the scope of the domain to be measured, delineating the knowledge and skills to be tested at each grade, the format of the NAEP assessment, and the achievement levels. (Note: Combines 2002 Principles 1 and 5.)

Principle 2 – Development and Update Process: develop and update frameworks through a comprehensive, inclusive, and deliberative process that involves active participation of stakeholders. (Note: Updating frameworks was added to this section.)

Principle 3 – Framework Review: determine whether an update is needed to continue valid and reliable measurement of the content and cognitive processes reflected in evolving expectations of students and anticipates a framework review at least once every 10 years. (Note: This section was added to describe the process for determining if a framework update is needed and to address timing included in 2002 Principle 7.)

Principle 4 – Resources for the Process: take into account state and local curricula and assessments, widely accepted professional standards, exemplary research, international standards and assessments, and other pertinent factors and information.

Principle 5 – Elements of Specifications: shall be developed for use by NCES as the blueprint for constructing the NAEP assessment and items.

Principle 6 – Role of the Governing Board: shall monitor all framework development and updates. The result of this process shall be recommendations for Governing Board action in the form of three key documents: the framework; assessment and item specifications; and contextual variables that relate to the subject being assessed.

Updating Frameworks. The original Framework Development Policy in 2002 was stated in terms of developing new frameworks because this had been the primary focus of the work at the time the policy was adopted. Only Principle 7 referred to revising frameworks, but provided little guidance about the process. Therefore, the 2018 revision of the original policy was undertaken to include provisions for updating frameworks when a complete revision might not be necessary. References to updating frameworks were added throughout the policy and guidance about the update process was included in Principle 2.d.

The scope and size of a framework development project shall determine the size of framework panels and the number of panel meetings needed. A framework update project may require smaller panels and fewer meetings if a smaller scope is anticipated for recommended revisions. Each project shall begin with a review of major issues in the content area. For a framework update, the project shall also begin with an extensive review of the current framework, and the Visioning Panel shall discuss the potential risk of changing frameworks to trends and assessment of educational progress. (NAGB, 2018b, p. 6)

An important consideration for making decisions to update a framework is the potential impact on NAEP reporting. This concern was addressed under Principle 6.d. “In initiating a framework update, the Governing Board shall balance needs for stable reporting of student achievement trends. Regarding when and how an adopted framework update will be implemented, the Board may consider the NAEP Assessment Schedule, cost and technical issues, and research and innovations to support possibilities for continuous trend reporting.” (NAGB, 2018b, p. 9)

Reviewing Frameworks. In the 2018 Framework Development Policy, a process was included for reviewing frameworks to determine if/when an update was needed. Principle 7 of the 2002 policy emphasized the importance of holding a framework stable for 10 years. The 2018 new Principle 3 calls for reviewing frameworks at least once every 10 years. Further, this new principle describes the review as considering the current relevance of the assessments and frameworks, input from experts, and the risk of changing the reporting of trends. The policy makes clear the decision to update involves the full Board’s recommendation and describes the process for conducting an approved update.

Principle 3 also explains that ADC, within the 10-year period, may observe major changes in the states’ or nation’s education system related to NAEP frameworks and when/if these changing

conditions warrant recommending an update to the full Board. The Board’s decision may involve convening a Visioning Panel to examine the issues including commissioning special research and analysis to inform the updates under consideration. Based on these findings, a determination will be made about next steps and the processes to be implemented as described in the policy.

Participants/Stakeholders in Framework Panels. The 2018 policy identifies the various stakeholders in a comprehensive list (page 2) that applies to all aspects of the framework development or update processes. In the 2002 policy, stakeholders were identified under various principles and consistent terms were not always used. The 2018 policy, also provides more specificity about the participants in the framework development panels. While both policies call for the use of content experts, curriculum specialists, state and local educators, and policy makers, the 2018 policy is more specific about involving members with classroom teaching experience. The 2018 policy specifies that at least 20 percent of the members have classroom teaching experience, perhaps in recognition that it may be difficult for current classroom teachers to make the time commitments required for these projects, even though funds for substitute teachers are included. For example, a recent framework project required approximately 15 days of meetings. The bottom line as described in the contract requirements document is that anyone chosen to serve on these panels “must be well qualified by content knowledge and familiarity with the knowledge, skills, and abilities in the respective subject, while addressing all grade levels designated for the assessment.” (NAGB, 2018a, p. 16)

Additionally, the 2018 policy identified an upper limit for the number of participants in panels. Although the 2018 policy does not provide a rationale for these limits, perhaps this change was to facilitate the consensus process, as well as shorten timelines and reduce expenses. The number of panel members working on past projects has sometimes been much larger than 30. For example, the project for the 2009 NAEP Science Framework development used a total of 57 panelists, with no duplication across committees. A challenge with using only 30 panel members will be to attain the desired diversity for the framework panels as described on page 5 of the policy (NAGB, 2018b). Balancing these competing priorities will be an ongoing consideration. Fortunately, the 2018 policy recognizes that it may be necessary to add additional members. This option will be most needed for projects that are large in scope, that is, all three grade levels and multiple areas of expertise required.

It should be noted that the participants in framework development panels are identified by the contractor hired to conduct the assessment development activities. This is not a nominations process. Governing Board staff (sometimes Governing Board members) review the proposals and monitor the implementation of contract activities. For example, if the diversity or classroom experience goals indicated in the policy are not present in the names submitted as panelists, staff would ask the contractor to augment the panel to account for identified deficiencies.

Table 2, which is found at the end of the next section, includes a summary of the stakeholders discussed in this section and their expected panel assignments.

Framework Committee/Panel Functions. The 2002 and the 2018 policies are both nominally and substantively different: nominally in terms of the panel names and substantively in their composition. Both policies utilize two framework development groups and they have separate functions – the first function is to develop the high-level guidance for the work and the second function is to develop drafts of the documents that are consistent with the guidance. The more substantive difference is their composition and division of labor. The 2002 policy provides for separate groups of individuals and the 2018 policy provides for overlapping participants in the visioning and development activities. Although the policy does not specify the rationale for the overlap, it is likely the development panel will more fully understand the vision and guidelines for completing the work without having to be informed about it separately.

A third group of panelists is the technical advisors, primarily testing specialists. The 2018 policy describes their involvement as a resource to the framework development work rather than as a committee. This approach permits different experts to be involved on different topics when their expertise is needed. For example, expertise about assessing certain types of content or expertise about the impact of changes on maintaining trends. The framework panels would be able to get expert advice as needed during their deliberations rather than waiting for a meeting of the technical advisors to be scheduled. The work of the technical advisors is expected to be conducted by representatives who participate in framework development meetings and as a group in separate meetings for more in-depth technical discussions.

Table 2 below provides a comparison of the functional working groups and the participants in each which were discussed in the previous sections.

Table 2	
Framework Development Groups Comparison	
2002 Policy (NAGB 2002a)	2018 Policy (NAGB 2018b)
<p><u>Policy Oversight/Steering Committee</u></p> <ul style="list-style-type: none"> • Represents key policy groups, etc. • At least 30% users and consumers • Formulates guidelines for the process consistent with law and NAGB charge • Monitors progress of project • Reviews final product before Governing Board 	<p><u>Framework Visioning Panel</u></p> <ul style="list-style-type: none"> • Represents all stakeholders, including policy makers and users/consumers • At least 20% have classroom teaching experience • Formulates initial guidance for framework development • Includes up to 30 members (including up to 15 on Development Panel) • Additional members as needed
<p><u>Planning Committee</u></p> <ul style="list-style-type: none"> • Content experts & educators, etc. 	<p><u>Framework Development Panel</u></p> <ul style="list-style-type: none"> • Subset of Visioning Panel

Table 2 Framework Development Groups Comparison	
2002 Policy (NAGB 2002a)	2018 Policy (NAGB 2018b)
<ul style="list-style-type: none"> • Consider NAGB Charge and project guidelines • Develop deliverables • No overlap with Steering • Classroom teachers “well represented” 	<ul style="list-style-type: none"> • Proportionally higher content experts & educators than the Visioning Panel • Detailed deliberations to resolve issues & recommend framework • Up to 15 members • Additional members as needed
<p><u>Committee of Technical Experts (TAC)</u></p> <ul style="list-style-type: none"> • Primarily testing experts • Involved where appropriate • Respond to technical issues raised by the committees • Review documents, esp. specifications • Provide guidance to project staff 	<p><u>Technical Experts (TAC)</u></p> <ul style="list-style-type: none"> • Primarily testing experts • A resource to framework panels • Respond to technical issues raised during deliberations and meet separately, as needed • Review documents, esp. specifications

Natural Tension Points

The Framework Development Policy recognizes several natural tensions that exist in the education community at large. Education disciplines and the professionals who work within them are not unidimensional. Professionals naturally have different viewpoints about what is most important, what is most important to assess, and how that content should be assessed and reported. The policy provides the following guidance about the consensus process for developing or updating an assessment framework to be as broadly inclusive as possible.

In balancing the relative importance of various sources of information, framework panels shall consider direction from the Governing Board, the role and purpose of NAEP in informing the public about student achievement, the legislative parameters for NAEP, constraints of a large-scale assessment, technical assessment standards, issues of burden and cost-effectiveness in designing the assessment, and other factors unique to the content area. (NAGB, 2018b, p. 8)

Additionally, there are frequently concerns about the scope of the content or range of content difficulty included in a framework. The Framework Development Policy recognizes this as a natural tension point and provides the following guidance about addressing this concern and resolving it through the panel consensus process.

The NAEP framework development and update processes shall be informed by a broad, balanced, and inclusive set of factors. The framework shall reflect current

curricula and instruction, research regarding cognitive development and instruction, and the nation's future needs and desirable levels of achievement. This delicate balance between "what is" and "what should be" is at the core of the NAEP framework development process. (NAGB, 2018b, p. 7)

These are not all of the possible tension points that can arise in a broad-based committee process where varying opinions naturally exist. However, they do illustrate the Board's acknowledgment of them and guidance about resolving issues when they arise.

Resolving Points of Disagreement

Clearly, the Board acknowledges that different people and groups have different opinions about even the simplest constructs. In every framework adoption process, there is always some disagreement about the decisions represented in framework documents. The Framework Development Policy anticipates that there will be differences of opinion and provides guidance in this regard.

Panels shall consider all viewpoints and debate all pertinent issues in formulating the content and design of a NAEP assessment, including findings from research. Reference materials shall represent multiple views. For each project, protocols shall be established to support panel deliberations and to develop a unified proposal for the content and design of the assessment. Written summaries of all hearings, forums, surveys, and panel meetings shall be made available in a timely manner to inform deliberations. (NAGB, 2018b, p. 6)

This is not a new challenge. Resolving these differences is what was envisioned by use of the term "consensus process" in the authorizing legislation. As mentioned in an earlier section of this report, the very first Reading Framework contains this statement.

While objectives resulting from such a consensus process reflect neither a narrowly-defined theoretical framework nor every view of every participant, they do represent the thinking of a broad cross section of individuals who are expert in the areas of literacy research and reading instruction and who are deeply committed to the improvement of reading in our schools. (NAGB, 1990, p. 8)

Another example is the statement made by Charles Smith, then Executive Director, at the August 2004 Board meeting about the adoption of the 2009 Reading Framework which was two years in the making.

Thousands of hours of effort have been devoted to the initiative, and the result awaiting your decision is, I understand, the most scrutinized framework ever to come before this Board. (NAGB, 2004e)

As the Governing Board has become more experienced in the process of identifying the content to be assessed, the framework documents themselves have become more thorough and more thoroughly and openly discussed. The Governing Board has expanded the involvement of experts in the field, utilized the research base within each discipline, and provided more opportunities for public comment. These activities are discussed in the next section of this report.

V. Framework Development and Implementation Activities

The legislation and Framework Development Policy have not changed substantially since enacted, but the activities to implement a new framework or update an existing one are much more extensive today than they were in the early 1990's. Some of the important changes are highlighted in this section.

Developing and Updating Assessment Frameworks

The development of a framework for a new assessment or updating one is guided by the schedule of NAEP assessments adopted by the Governing Board. (NAGB, 2018b) The assessment schedule is a forward-looking document and identifies when changes in a framework might be expected. When development of a new framework or a framework update is initiated, several concerns must be balanced. For example, the need for stable reporting of student achievement trends, cost, specific changes in the discipline, relevant research, and innovations or new initiatives in impacting the field. These concerns are mostly objective considerations, but there are also more subjective elements. For example, when the subject area includes competing ideologies for which there is no obvious consensus, it can lengthen the timeframe for completing the framework. Making a decision to develop or update a framework is a complex process and involves many decision points as discussed in the following section.

Framework Decision Points

The framework policy broadly describes the process for developing a new framework and updating an existing one. It does not prescribe an order of events, although one may be logically inferred from the policy. Throughout the process of framework development, there are a number of important interactions between the Governing Board and its committees, subject area experts, stakeholders, the general public, and the panels convened to make recommendations to the Board.

The Governing Board by-laws assign responsibility for implementing the processes involved in framework development to the Assessment Development Committee (ADC). Their duties in this area include: developing and implementing a broadly inclusive process, developing content objectives, ensuring the active participation of various stakeholders, developing assessment specifications, and providing for the review of test frameworks and specifications by other

groups. (NAGB, 2010b, p. 7) Additionally, the by-laws assign to ADC the responsibility of reviewing subject-specific background questions and all cognitive test items.

Consistent with the by-laws, Principle 6 of the 2018 policy describes the role of the Governing Board and ADC for framework development. (NAGB, 2018b, p. 9) ADC's role is to monitor all the activities leading up to a framework development or update project and the ongoing project work. The Board's role is to approve and adopt the charge to the Visioning Panel and final framework documents prior to their handoff to NCES for developing the test questions. Although the Assessment Development Committee has the primary role for oversight of framework development/updating processes, other committees of the Board and NCES are involved as needed. Typically, COSDAM is involved in technical issues (scoring, scaling, trend reporting, etc.), R&D is involved in discussions about reporting and contextual data collection, and NCES is involved in issues related to item development, test construction, test scoring, data analysis, and reporting.

The discussion below provides a brief summary of important decision points and offers fundamental questions to be answered during the process of developing or updating a framework. It does not include every possible question or interaction between the Board, its committees, and other organizations. Appendix D supplements the information provided below with a little more detail about the range of actions and the involvement of the Board, the Assessment Development Committee, contractors, and external reviewers.

1. **Should a framework revision or update be considered?** At least once every 10 years the Assessment Development Committee determines the timing for review of frameworks based on two key variables – the NAEP Assessment Schedule and lead time needed to implement a new/revised framework, including developing and field-testing new items for the assessment. The committee considers the relevance of assessments and their underlying frameworks, and any changes occurring in the field in making this decision. In their deliberations, the Assessment Development Committee may solicit input from experts, hear testimony or review white papers, discuss and determine what action should be recommended to the full Governing Board. Recently, comprehensive reviews of state standards were conducted for mathematics and science to document the overlap between the NAEP frameworks and the array of state standards before deciding to pursue a framework update. (AIR, 2018a, 2018b, 2018c, 2018d; HumRRO 2021)
2. **Is a new framework or update needed?** The Board receives a report from the Assessment Development Committee about their discussion and recommendations about the framework. Depending on the issues and interest, the Board may also hear presentations from various experts. If the Board agrees with the Assessment Development Committee recommendation, they will review, revise (if needed), and adopt the charge to the Visioning Panel. Many other actions will follow including contracts, working panels, and revised framework documents. See Appendix D for additional detail on these activities.
3. **Is the draft framework ready to be evaluated by external reviewers?** As the work to develop the framework proceeds, Governing Board staff carefully monitor the entire

process. They have weekly conference calls with the project team and attend all the meetings of the Visioning and Development Panels. Others also attend the panel meetings, including the project technical advisors and representatives from NCES. This involvement throughout the project identifies and resolves potential issues. The Assessment Development Committee receives regular reports from the Framework Development Project staff and Governing Board staff, who in turn provide updates to and seek input from other Committees of the Governing Board on issues related to their areas of expertise and responsibility. Governing Board staff, in consultation with the Assessment Development Committee, determine when the contractor can begin the process of conducting external reviews. Agreements with the contractor describe how feedback will be solicited, reviewed, and incorporated.

4. **What feedback should be incorporated in the framework?** The Framework Development Panel must consider all viewpoints; debate all pertinent issues about the content, including findings from research; and make revisions to the framework accordingly. This will likely be an iterative process, that is, reviewing and revising framework documents may occur more than once. After feedback is incorporated, the final draft is shared with staff and the Assessment Development Committee who review and recommend revisions or approval by the full Board.
5. **Should the framework be adopted and implemented?** In making a final decision, the Board should consider the process used to develop the framework, the role and purpose of NAEP to inform the public about student achievement, the legislative parameters for NAEP, constraints of a large-scale assessment, technical assessment issues (for example, the continuation of trend lines), issues of burden and cost-effectiveness in designing and implementing the assessment, and other factors unique to the specific content area. After the framework is approved, the next logical steps will be the development of item specifications and contextual variables for the assessment. Although it is likely the panels have been considering these elements throughout their deliberations, they will formalize a document containing the prescribed information and submit it to the Board for review and approval through the Assessment Development Committee. Once approved, NCES and their contractors will begin item development and other planning for the assessment.

Appendix D supplements the information provided above with a little more detail about the range of actions and the involvement of the Board, ADC, contractors, and external reviewers. It highlights the major questions/decisions and other subordinate ones needed for framework development, approval, and adoption by the Board. Many smaller decisions and steps are behind these major decision points, but cannot be captured in this simplistic presentation. While the decision points are presented in an orderly manner, they may not always be implemented in the chronology implied by this list.

Need for Subject Area Updates

The 2018 Framework Development Policy added an entire section on how framework reviews would be conducted. For example, “the ADC shall solicit input from experts to determine if

changes are warranted, making clear the potential risk of changing frameworks to trends and assessment of educational progress.” (NAGB, 2018b, page 6) In making a decision about updating a framework, the Board needs to have explicated how extensive the revisions to a framework are likely to be, e.g., if substantive change would be required in the content being reported. For example, a major change would be changing the content areas and subscores reported. A more minor update could keep the test design and reporting intact, but recommend changes in how the content is assessed or which elements of the content are no longer relevant. Obtaining clarity about the need for an update in a subject area could involve the solicitation of white papers from subject matter experts about how the subject area should be assessed and important elements that should be considered. Another alternative could involve a panel discussion at an Assessment Development Committee or a full Board meeting. In either case, it will be the Board’s responsibility to determine if a revision or update is needed.

Framework Panelists

The Board has always valued the opinions of and made every attempt to include classroom teachers, curriculum specialists, school administrators, policy specialists, subject-matter experts, and representatives of the general public in framework development projects. However, balancing the membership of panels is not easy. The current Framework Development Policy provides the following guidance.

In accordance with the NAEP statute, framework development and update processes shall be fair and open through active participation of stakeholders representing all major constituents in the various NAEP audiences, as listed in the introduction above.

Framework panels shall reflect diversity in terms of gender, race/ethnicity, region of the country, and viewpoints regarding the content of the assessment under development. (NAGB, 2002a, p. 5)

The role of the Governing Board, in particular the staff, and the Assessment Development Committee, is to review the panelists recommended by the contractor and ensure they meet the rigorous requirements of the contract. “All panelists must be well qualified by content knowledge and familiarity with the knowledge, skills, and abilities in the respective subject, while addressing all grade levels designated for the assessment.” (NAGB, 2018a, p. 16) If there are concerns about panelists individually or collectively, it is incumbent upon the Governing Board to communicate these concerns and ensure they are addressed promptly.

The Framework Development Policy adopted in 2018 made some changes to the composition of the panels. Please refer to that earlier section for those details.

Public Comment Opportunities

It has always been the practice of the Board to seek public comment on the framework to be adopted. Sometimes, this included only advertising a comment opportunity in the Federal

Register which may have limited the number of comments received. Since the early 2000's, the Board has expended much more effort in seeking feedback. Examples include public forums, meetings with state leaders in the content area and assessment directors, and working collaboratively with policy advisory groups and professional associations. The current policy guidelines emphasize the importance of a broad reach in obtaining public comment.

Public comment shall be sought from various segments of the population to reflect many different views, as well as those employed in the specific content area under consideration. (NAGB, 2002a, p. 5)

People who comment on a framework usually represent a constituency and have a particular viewpoint to be expressed. Their opinions may be minute or major and may be raised quietly or loudly. No matter, their opinions are important and hearing them is important. This does not mean the Governing Board is compelled to implement all recommendations made during the public comment period.

Constraints – Cost, Contracting, and Timelines

In addition to the decision about developing or updating a framework, the Governing Board must also contend with matters of budget, contracting, and timelines. These concerns are interrelated and difficult to parse.

Cost Factors. The Governing Board budget is constrained by the appropriation of funds from Congress. The cost of a framework development project depends on a number of factors including the complexity of the requirements, the competitiveness of the marketplace, the timeframe for completing the project, the extensiveness of revisions requested, and the unexpected. As might seem obvious, the more complex the project and the longer it takes to complete, the more expensive it will be. Some of these factors are predictable, but others, like the COVID-19 pandemic, are more difficult to anticipate. In general, the Governing Board budget is sufficient to cover the cost of developing new or updating existing frameworks when done one at a time. Circumstances requiring multiple contracts in the same year may entail extensive advance planning to accommodate.

Framework Contracts. Contracts with organizations experienced in developing educational assessments have been used by the Board since it was established in 1988. The very first frameworks were supported by contracts with the Council of Chief State School Officers (CCSSO) that established the National Assessment Planning Project. Over the history of framework development, contracts have been awarded to the American Institutes for Research; American College Testing; the College Board; the Council of Chief State School Officers; the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) at UCLA; WestEd; and others. (Jago, 2009)

In recent years, the number of contractors bidding on NAEP Assessment Framework Development contracts has dwindled. The failure to have multiple bidders is a disadvantage

because choice in vendors is desirable, as is competitive bidding. The root cause of the reduction in bidders is unknown, but reasons can be assumed to include the uniqueness of the project, lack of prior experience, changing or realigned corporate capabilities, availability, conflict of interest, potential for controversy, lack of interest, or other factors.

Contracting Procedural Requirements. The sophistication of the framework development procedures and contracting requirements has grown over time. The Framework Development Policy implies a number of processes that should be completed by those developing frameworks, but the contract requirements are much more detailed. For example, the policy is contained in nine pages, but the current Governing Board procedural requirements for contractors is 35 pages long. These requirements were recently Attachment A to the Governing Board procurement *Update of National Assessment of Educational Progress (NAEP) Frameworks for Mathematics, Reading, and Other Subjects*. (NAGB, 2018a)

The length is necessary because of the number of detailed requirements contained therein. The current work calls for regular monitoring of the project by Governing Board staff, and regular reporting to the Assessment Development Committee throughout the scope of the contract. Attention is also given to the identification of panel members and the processes being implemented. A process report is required which summarizes all procedures implemented and issues encountered. This detailed information is used to support the validity of the recommended framework, specifications, and contextual variables. The Table of Contents from the most recent Statement of Work is found in Appendix E and shows the extensiveness of the requirements covered.

Timelines. This discussion about timelines will be considered from two perspectives: the time required to develop and adopt a new framework, and the lead time to implement changes to the assessment. These are related in that the latter cannot be accomplished without the former.

The lead time for changes to the assessment will be considered first because it has a fixed end point due to the NAEP assessment schedule. According to information NCES has communicated at Board meetings, the timelines for creating new assessment items and including them in a NAEP assessment can take from five to six years, whether the assessment framework is new or is being updated and applies equally to developing a new digital-based assessment or digital items for an existing assessment. This timeline is long because items must be developed and reviewed, tried out with small groups of students, analyzed, added to existing assessments, and then administered in an actual NAEP assessment. Because NAEP is not administered every year this timeline is longer than is typical for most assessment programs.

In understanding this timeline, it might be helpful to think about developing assessment items in three phases:

- The first phase is to develop questions for cognitive skills to be assessed, including reviews by experts in the field and conducting cognitive labs to ensure the questions are assessing the cognitive skills intended by the framework. Sometimes, several rounds of review and

revision are needed to develop questions that meet the NAEP framework and review criteria. These questions also must be formatted for the platform on which they will be presented and reviewed in that same manner.

- The second phase involves collecting data from students, which is called pilot testing. This is usually done during a regular NAEP testing window. Questions for this phase must be formatted and presented as they ultimately will appear on NAEP. Sufficient quality-control steps must be performed to ensure data capture and scoring are accurate. Additionally, data must be collected from a significant number of students so that results can be correctly interpreted and used to develop future forms of NAEP. Another round of reviews occurs after these data are collected which includes examining item and test statistics, including item bias. If questions are rejected at this point, they may be revised and recycled through the first two phases.
- The third phase involves administering forms (blocks) in the actual NAEP assessment, administering them to students, scoring questions, and summarizing the data to be reported.

The schedule may also depend on when the Board authorized the work to begin as well as the level of innovation represented in the items identified in the framework. After the Governing Board approves the assessment framework, item specifications, and contextual variables, work can begin. After item writing is completed and items are reviewed by standing committees of content experts and the Governing Board, the approved items can be field tested (item tryouts) with the target group of students. Field testing will be done during the regular NAEP assessment window with a special sample of students. Those items which survive statistical standards and another round of reviews are assembled into forms and reviewed by NCES and the Governing Board. Because the field testing is done in one calendar year and the actual test administration is done in another, the minimum amount of time needed is two years. However, if new item types or constructs are contained in the framework, or if an innovative delivery of item content must be explored, more time will be required to try out items and analyze them before they are deemed valid for their intended purpose. It is not the purpose of this paper to discuss cognitive labs or other methodologies useful in determining item validity. It is enough to say this takes much longer.

The most obvious statement to be made about developing frameworks is that developing a new framework should take longer than updating an existing framework; however, that statement is very misleading. The more agreement there is in a subject area is probably a better factor for predicting how much time will be involved in developing a new framework or updating an existing one. As the Framework Development Policy prescribes, the Governing Board is seeking a consensus project; therefore, the longer it takes to reach consensus the longer the framework project will take. In thinking about the timeline for a framework project, one cannot think only about the framework panels who make content recommendations to the Board. One also must consider the time required to hire contractors on the front end of the work, as well as the public comment period and Governing Board deliberations/actions on the back end. In the best-case scenario where there is a great deal of consensus about the content to be assessed and when the public commentary is also agreeable, a period of one to two years

can be expected for developing a charge, issuing a procurement, hiring a contractor, convening panels, etc. In the worst-case scenario where there is contentious debate, much more time is required. Finally, if the Board cannot support the recommended framework and reach a compromise that the Visioning and Development panels can support, then the entire process must begin again.

VI. Issues for the Future

In recent years the Governing Board has been having strategic discussions and reflecting on the data NAEP has been reporting over the last 40+ years. These discussions were designed to focus the Board’s work on the strategic priority of providing NAEP information in the most innovative and effective ways. The Governing Board Strategic Vision for 2020 was adopted in November 2016 and the Strategic Vision for 2025 was adopted in September 2020 (NAGB, 2020b). Both of these efforts have included a vision for assessment frameworks. In both vision statements, the reference to frameworks is found in the goal area “to innovate.” Both versions are shown below with emphasis added.

2020 Strategic Vision

The National Assessment Governing Board will revise the design, form, and content of The Nation’s Report Card using advances in technology to keep NAEP at the forefront of measuring and reporting student achievement.

The Governing 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.

2025 Strategic Vision

The National Assessment Governing Board will ensure The Nation’s Report Card remains at the forefront of assessment design and technology by refining design, content, and reporting, increasing relevancy for NAEP users and inspiring action to improve achievement for all.

The Governing Board will optimize the utility, relevance, and timing of NAEP subject-area frameworks and assessment updates to measure expectations valued by the public.

As the Board continues implementing their Strategic Vision for 2025, they will establish priorities for the ongoing assessment framework activities. Consequently, discussing the issues about future framework development seems appropriate in this paper.

Framework Responsiveness

For the development of the Board’s 2020 Strategic Vision described above, work groups were formed to consider avenues for advancing NAEP. These working groups and committees

explored new approaches that could be utilized. One of the discussions focused on how the NAEP frameworks could become more responsive to small changes in the discipline area. The aim was to make adjustments in a manner that could reduce the timeframe typically required to change a NAEP framework and assessment.

At their joint “strategic vision” planning meeting in November 2016, the Assessment Development Committee (ADC) and the Committee on Standards, Design, and Methodology (COSDAM) discussed the concept of making the frameworks more responsive to the current curriculum standards being implemented on a broad scale (e.g., the Common Core State Standards). Other topics discussed included maintaining trends, valid alignment with student learning activities (e.g., writing using word processing), lead time for changes, the extent of NAEP’s alignment (or lack thereof) with state and other content standards, changes in the field that might not be detected by the static nature of NAEP, communicating incremental changes to the public, not creating moving targets for school systems, and the concept of dynamic frameworks. (NAGB, 2016) (NAGB, 2017, p. 36)

At the joint meeting of these two committees in March 2017, there was a more in-depth discussion of the “dynamic framework” concept. The Governing Board committees agreed that the term “dynamic frameworks” was not the best way to characterize this effort because it implied that the frameworks would constantly be in flux, and such fluidity or the perception of it could have unintended consequences as well as miscommunicate the nature of the updates which might occur. There also was agreement that more discussion and study about this topic was important with the goal of learning how frameworks could become more responsive without affecting NAEP’s trend reporting. (Haertel, et.al., 2012, pp. 3, 16-17) (NAGB, 2017, pp. 28-29)

The concept of “dynamic frameworks” as presented in the *Future of NAEP Panel White Paper*, is intriguing. The paper suggests these considerations:

Dynamic frameworks would balance dual priorities of trend integrity and trend relevance. ... it would be important to establish and to enforce clear policies concerning the reporting of significant changes in assessment frameworks, so as to alert stakeholders when constructs change and to reinforce the crucially important message that not all tests with the same broad content label are measuring the same thing. (Haertel, et.al., 2012, p. 17)

This discussion is ongoing.

Standing Subject-Matter Committees

Another idea for identifying changes needed in a framework is to make use of NAEP standing subject-matter committees. NCEC contractors establish standing committees of content experts, state and local education agency representatives, teachers, parents, and representatives of professional associations to review the items developed for NAEP. Each

standing committee considers: the appropriateness of the items for the particular grade; the representative nature of the item set; the match of the items with the framework and test specifications; and the quality of items and scoring rubrics. (NCES, 2020b)

The *Future of NAEP Panel White Paper* makes the case for using such committees as follows.

Under our proposal, standing committees would review field test data, for example, and be aware when “after-the-fact” distortions of the intended domain occur because more ambitious item types fail to meet statistical criteria. Standing committees could also update assessment frameworks incrementally, at the same time assuring that the constructs underlying NAEP reporting scales did not drift to the point where new trend lines were indicated. In particular, assessment frameworks would be updated to accommodate changing learning environments. Inquiries with dynamic knowledge representations and simulations in science would be one example. (Haertel, et.al., 2012, pp. 17, 44)

The NAEP contractors already use standing subject-matter committees, particularly for item reviews. However, they are not charged with the explicit functions described by Haertel, et al. It is customary for Governing Board staff to attend the debriefing sessions of these committees, so some consideration could be given to seeking input as suggested.

Digital-Based Assessment Frameworks and Policy

NAEP transitioned to digital based assessments in 2017. Updating frameworks in this context should provide clarity about whether the construct of the assessment is changed by the digital-based format. Additionally, it is important to clarify how the content is to be assessed differently using digital techniques. Although the new platform may not substantially alter the construct being assessed, the design implications of the digital-based formats should be elaborated so that the revised framework is consistent with this new delivery system.

The Assessment Framework Development Policy does not address delivery systems or related procedural details, rather these details are addressed in procedural requirements included in framework procurements. (NAGB, 2018a, p. 19) One of the rationales for seeking framework updates going forward includes incorporating new items that will more fully capitalize on current advances in digital-based assessment. The ADC and Governing Board staff need to determine if the policy should contain guidance specifying the extent to which frameworks should include content addressing platform-specific elements. (NAGB, 2018b)

VII. Reflections and Recommendations

Reflections on Framework Development Changes

Over time, the procedures for implementing frameworks have evolved in several important ways. Beginning with the frameworks developed since the early 2000s, the frameworks and process reports have demonstrated the broad representation in this work, have included more thorough documentation of the activities conducted, and have validated the increased public comment. While the authorizing legislation and the Governing Board Framework Development Policy are important, their influence on the frameworks has not really changed. In my opinion, the law and the policy have not been the primary drivers of these changes. The greatest influencer in these changes has been the increased utilization of test information for accountability decisions and the increased expectations for test publishers, including NAEP, because of this increased use.

Broad Representation. The framework committees have always included representation of subject-area experts (academicians and curriculum specialists), educators (teachers, local and state administrators), policy makers, parents, and the general public. Additionally, they were diverse in terms of gender, ethnicity/race, region, and representation of public-private school students, high-poverty students, and low-performing school students. When the participation of all students in NAEP and accommodations were added to the assessment, persons who specialize in assessing students with disabilities and English learners also were included. Documentation of participants in framework committees and in the public comment opportunities provides evidence of this broad representation.

More Thorough Documentation. The framework documents produced today provide much more detail than the first framework documents, especially in terms of item examples and information about achievement levels. An example is found in the 1996 and the 2019 Mathematics Assessment Frameworks for NAEP. The 1996 Mathematics Framework includes three example items, one for each type of item to be included in the assessment: multiple-choice, open-ended, and extended open-ended. In contrast, the 2019 Mathematics Framework includes 14 unique items, five to describe the types of items included in the assessment (multiple-choice, short constructed-response, and extended constructed-response), and nine to provide examples of pure mathematics items (four items), calculator-involved items (three items), and items using manipulatives (two items). In addition, the 2019 Mathematics Framework included a separate discussion of accessibility to item content for students with disabilities and English learners, after the examples of items. More detailed information about item design and accommodations is found in the *Assessment and Item Specifications for the NAEP Mathematics Assessment*. (NAGB, 1992; NAGB, 2006a; NAGB, 2007)

Another example of more thorough documentation in framework documents is the description about NAEP achievement levels. The 1996 framework describes the achievement levels in a single paragraph.

The new NAEP Mathematics Framework was considered in light of the three NAEP achievement levels basic, proficient, and advanced. These levels are intended to provide descriptions of what students should know and be able to do in mathematics. Established for the 1992 mathematics scale through a broadly inclusive process and adopted by the Governing Board, the three levels per grade are a major means of reporting NAEP data. The new mathematics assessment was constructed with these levels in mind to ensure congruence between the levels and the test content. (NAGB, 1992, p. 3)

However, the 2019 Mathematics Framework provides much more information, including achievement level descriptions. An introduction to achievement levels and the policy definitions is provided in the overview section (page 2) and an entire appendix is devoted to the achievement level descriptions (pp. 71-76). Descriptions are provided for each grade level and for each of the three levels (*basic*, *proficient*, and *advanced*) within each grade level. Also provided are the scale score points associated with each achievement level. A great deal of detail is provided in these descriptions; in fact, the grade 12 descriptions require three pages. (NAGB, 2006a)

Greater Visibility and Debate. The advent of reporting scores on NAEP which were associated with individual locales has been a huge driver for the visibility of and debate about what is assessed. When the Governing Board was authorized in legislation, preparations had been made to provide an opportunity for states to participate voluntarily in NAEP and receive scores for their own state. One of the major concerns about the Trial State NAEP project was the content, or framework, for the assessment. In fact, a mathematics content committee was formed and they developed an objectives-based approach similar to what states would have used. Although NAEP had always been developed under the scrutiny of subject matter experts, this became the most visible and extensive review process for the assessment content up to that time.

The greatest visibility and debate about NAEP came as a result of the No Child Left Behind Act (NCLB) in 2001. Some states had been participating in NAEP voluntarily for several years, however, NCLB required all states to participate. Further the NCLB requirements revealed that NAEP would be used to evaluate the progress being reported by states on their own state tests and based on their own proficiency definitions. The publication of state-by-state NAEP results, especially in terms of the percent proficient, became controversial and the topic of much debate. In 2003, NCES began comparing each state's standard for proficient performance in reading and mathematics at grades 4 and 8 by placing the state standards onto a common scale of the National Assessment of Educational Progress (NAEP). The periodic report, *Mapping State Proficiency Standards* onto the NAEP scales also created much discussion and debate in the educational assessment community. (NCES, 2009; Ho and Haertel, 2007a; Ho and Haertel, 2007b)

There were claims that the NAEP content was different from state content and that the levels of proficiency for NAEP were higher than typical grade level expectations for students. There

was partial truth in these claims, but the claims did not acknowledge the intentional design differences between NAEP and state assessments, including the intended meaning of the achievement levels, especially *proficient*. From the beginning, NAEP frameworks had avoided matching its framework to a single set of content objectives and had strived to be broadly representative of the content domain. The NAEP frameworks were never intended to be a curriculum framework, like the standards states use, and never claimed to be. In addition, in setting the NAEP achievement levels, the Governing Board did not want them necessarily to reflect only the current level of student achievement. The desire was to define the content students should know across a range of achievement. Therefore, educators were asked to identify content expectations for *basic*, *proficient*, and *advanced* levels of achievement. The debates about the use of the word “proficient” and the alignment of it with state definitions of proficiency, and the alignment of NAEP frameworks with state standards will continue as long as comparisons of results are made across different locales, different assessments, and using different performance level definitions.

Another concern about the content defined in the NAEP assessment frameworks was how to consider the impact of the Common Core State Standards and their subsequent adoption/implementation in numerous states. The National Governors Association supported this initiative and the U.S. Education Department provided grants (via several consortia projects) to support states in revising their standards and assessments to align with the “common core.” During this period, there also were calls for the NAEP frameworks to be aligned with the common core and alignment studies were conducted by groups external to the Governing Board. (Daro, et.al., 2015) Recently, comprehensive reviews of state standards were conducted by the Governing Board for mathematics and science. (AIR, 2018a, 2018b, 2018c, 2018d; HumRRO 2021) Prior to wide-spread adoption of the “common core,” there was much less convergence across state standards and expectations for students. This variability had historically impacted the feasibility and understandability of studies about the relationship of NAEP to state standards.

External Input/Public Comment. Input into the first NAEP content frameworks was obtained both from the committee members who recommended the content to the Board and from individuals and national organizations external to this work. Staff solicited comments on frameworks as well as posted notices of the Board’s intended actions in the Federal Register, a legal requirement still in effect. Today, proactive outreach activities for the purpose of obtaining feedback on the draft frameworks are required in the procurements issued by the Governing Board (NAGB, 2018a, p. 18). Contractors conduct these activities and document them in process reports prepared for the Governing Board. (WestEd, 2006, 2010, 2021)

The 2018 Framework Development Policy recognizes that external input is important. In fact, the policy calls for the identification of substantive issues at the beginning of the process to review the framework so these can be addressed during the project to develop or update the framework. “... the ADC shall solicit input from experts to determine if changes are warranted, making clear the potential risk of changing frameworks to trends and assessment of educational progress.” (NAGB, 2018b, p. 6) Additionally, framework development project staff

conduct extensive external reviews of the draft framework before a final draft is presented to the Board for adoption.

The excerpts below from the most recent process report for the NAEP Mathematics Framework illustrate the extensiveness of the outreach efforts conducted before the Board is presented a final draft for adoption. (WestEd, 2021, pp. E-3-4)

"Outreach to organizations and individuals ... was conducted with assistance from a number of collaborating organizations including the Council of Chief State School Officers (CCSSO), Conference Board for the Mathematical Sciences (CBMS) and its member organizations, National Council of Teachers of Mathematics (NCTM), TODOS: Mathematics for ALL (TODOS), Benjamin Banneker Association, National Council of Supervisors of Mathematics (NCSM), Association of Mathematics Teacher Educators (AMTE), Mathematical Association of America (MAA), and Mathematical Sciences Research Institute (MSRI).

"Organizations (e.g., NCTM, AMTE, TODOS, MAA) disseminated information about the project website (naepframeworkupdate.org) and through flyers, email newsletters, social media, website announcement, hosted webinars, and podcasts. In conjunction with partnership organizations, WestEd facilitated six live webinars, five in-person presentations, and one podcast recording.

"Across in-person and live venues, more than 1,000 people participated in outreach activities from the target stakeholder groups: Teachers, Curriculum Specialists, Content Experts, Assessment Specialists, State Administrators, Local School Administrators, Instructional Leaders, Policymakers, Business Representatives, Parents, Students, Users of Assessment Data, Researchers and Technical Experts, and other interested Members of the Public.

"Across digital communications, ... email and social media dissemination of information reached more than 25,000 people across the target audiences"

Important Policy Updates

When the *Framework Development Policy* was revised in 2018, adding a process for updating frameworks was conceptually important. Time will tell if it is of any practical significance. The Governing Board is such a deliberative body, it is not assumed that the time for completing an update will be substantially shorter than for creating a new framework. Additionally, it is unknown how receptive the users of NAEP will be to "minor" revisions to the framework. Of course, this is both a perception and a communication challenge, and only the communication concern can be addressed by Board actions.

Removing procedures from policy is a good practice, because policy documents should provide guidance about processes and describe desirable outcomes (e.g., a valid and reliable assessment). Changes in methodology and processes should be informed as much as possible by current research and accepted best practice. If these were to become embedded in a policy, frequent revisions might be necessary and become very burdensome. A policy should focus on the big picture. The 2018 changes to the policy successfully addressed this concern.

The updates to the *Framework Development Policy* made in 2018 included: incorporating the Development Panel as part of the Visioning Panel, specifying the expected size of the panels, and utilizing technical experts in a different manner. Each of these changes are important and should facilitate the process of framework development going forward. Incorporating the Development Panel into the Visioning Panel will facilitate the ongoing work of the panelists who will be revising the framework itself. Since these panelists will have heard and participated in the discussion of issues and rationales, they should be well prepared to implement the vision for the new framework. Limiting the size of the panels will facilitate the communication of panel members with one another and be more conducive to the consensus-building process. Finally, having the technical advisors available or participating in the Visioning Panel and Development Panel meetings will expedite the resolution of any technical concerns. All of these changes seem fitting and logical.

The revised 2018 *Framework Development Policy* has carefully addressed the use of classroom teaching expertise in the work of revising/updating NAEP frameworks. Almost everyone agrees that the involvement of classroom teachers is critical. That said, doing the work of revising a framework is time-consuming. Although framework projects include funds for substitute teachers' pay, it is likely that few active teachers or their administrators will be open to extended out-of-classroom time (approximately 15 days for a recent framework development process). The revised policy has addressed this tension by placing the importance on having classroom teaching experience on the Visioning Panel which requires less out-of-classroom time than the Development Panel. All members of both panels must be well qualified by content expertise and familiarity with the knowledge, skills, and abilities in the respective subject. Classroom teaching experience ensures that familiarity with the assessed grade levels will be included.

Recommendations

After reviewing mountains of minutes and many reading and mathematics framework iterations, as well as some historical documentation and reports, there are a few changes which seem worth considering.

Digital-based Assessments. Some questions in this area come to mind. Do the frameworks and specifications adopted by the Board adequately address both paper-based and digital-based assessments, especially in regard to the sample items included? Is an assessment in the digital space something about which the Governing Board needs a separate policy? A staff and committee discussion of these topics would be worthwhile.

Item Review Feedback. The Governing Board and NCES staff should discuss and develop a feedback loop process utilizing the item-review standing committees. In particular, this feedback loop should focus on identifying elements in the framework that could be revised because the assessment of them lacks fidelity to the desired outcome as intended in the framework.

Continued Discussion Needed. Although the construct of “dynamic frameworks” is alluring, it has not been defined operationally in a sufficient enough manner to evaluate its practicality for the Governing Board. At this point, a recommendation for future consideration is all that can be offered. Further study and implementation details are definitely necessary to make such a proposal viable. Perhaps the standing committee feedback loop is a first step for identifying small changes that are needed in a framework to clarify how the content will be assessed.

Suggestions

The following suggestions are related to framework publications. They are not presented in any order of importance and are offered for consideration of the Board and staff.

- The professional assessment standards cited in the Framework Development Policy also should be cited in framework documents because readers of these should not be left to wonder if they were utilized and implemented where applicable.
- The framework documents typically include a section of major changes. It would be helpful if these were expanded to include the rationale for the changes.
- While it is important to issue framework documents corresponding to each administration of NAEP, more clarity is needed about when the Board actually adopted the framework represented in the publication. Having this embedded in the report is fine, but not sufficient for easy historical clarity. The title of the document should be augmented to contain the adoption date.
- Given the 2018 Framework Development Policy about updating frameworks, the framework document should clarify if the framework represents a major revision that may impact trend or if only minor updates were made, i.e., to incorporate digital-based items. While this is may be an empirical issue, the framework document should indicate whether special analyses will be conducted to make this determination.
- The framework documents need to include a little more about the “big picture” process followed in producing the framework, including references and links to expert testimony and public hearings which led to adoption by the Governing Board. This need not detract from the presentation of the content, but could be included as an appendix, along with the names of panel members.

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The references reviewed for this report are organized into five categories. The general category, appearing first, includes all resources that did not fall under the other titles. The other categories are: Legislation, Assessment Frameworks and Reports, National Assessment Governing Board Policies, and Governing Board Meeting Materials, Minutes and Transcripts.

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Appendix A
Historical Context⁷ for Framework Development of the
National Assessment of Educational Progress

Dates	Historical Activities	Assessment Development
1960-70's ECS era	<ul style="list-style-type: none"> • The 1960s were a formative time for the development of NAEP. (NCES website: https://nces.ed.gov/nationsreportcard/about/newnaephistory.aspx#beginning) • 1964-68 – The Education Commission of the States (ECS), managed and conducted the first national assessments. They established an Exploratory Committee for the Assessment Progress in Education (ECAPE) and established a National Assessment Planning Project. • 1969 – First national assessment data collection, now known as the National Assessment of Educational Progress (NAEP), was the 1969 trial assessment of the citizenship, science, and writing performance of 17-year-old in-school students in the spring of that year. In the fall, 9- and 13-year-old students, as well as out-of-school 17-year-olds, were assessed. • The frameworks for the early NAEP utilized a content-by-process matrix to develop items for the assessment, most of which were released with the reporting. 	The assessment was based on a content-by-process matrix set of objectives developed by representatives for the Education Commission of the States (ECS).
1976-1988 Early national assessment and NAEP era ⁸	<ul style="list-style-type: none"> • The Comptroller General (GAO) Report, Make NAEP More Useful, was released in 1976. • The original national assessment legislation in 1978 brought changes to the oversight and organization of the assessment (now NAEP) and specified an Assessment Policy Committee of 17 members (the precursor to the National Assessment Governing Board). • A major study critical of NAEP (Wirtz & Lapointe, 1982) said NAEP was underdeveloped and underutilized, and of apparently negligible influence. • In 1983, a non-profit organization (Educational Testing Service, ETS) was selected as the NAEP Contractor and a redesigned assessment (more sophisticated sampling, scaling & analyses) was developed. • The 1986 reauthorization of the Elementary and Secondary Education Act (ESEA) included provisions for voluntary state assessments and referred to the national assessment as the National Assessment of Educational Progress, the name that continues today. It also continued the requirement for an Assessment Policy Committee of 19 members, adding two additional members representing elementary and secondary school principals. 	Because of the desire by some state members of ECS, two policy pushes changed NAEP. (1) Voluntary participation and reporting on states (2) A move to an objectives-based approach instead of the content-by-process matrix approach previously used for the assessments.

⁷ A thorough examination of the establishment and early years of the National Assessment Governing Board can be found in the report, *Overseeing the Nation's Report Card: The Creation and Evolution of The National Assessment Governing Board (NAGB)*. Vinovskis, M.A. (1998). <http://www.nagb.org/publications/95222.pdf>.

⁸ A thorough examination of the evolution of the National Assessment of Educational Progress is found in the book, *The Nation's Report Card: Evolution and Perspectives* (Jones & Olkin, 2004).

Appendix A
Historical Context⁷ for Framework Development of the
National Assessment of Educational Progress

Dates	Historical Activities	Assessment Development
	<ul style="list-style-type: none"> In 1986, the Trial State Assessments were begun in cooperation with the ECS and the Southern Region Education Board (SREB). The planning for this effort was advised by a mathematics content committee which wanted to develop an objectives-based approach that could lead instruction instead of the content-by-process matrix approach previously used for the assessments. 	
1988 – Present NAEP- NAGB era	<ul style="list-style-type: none"> The 1988 reauthorization of ESEA & NAEP (Hawkins-Stafford Act, 1988) included provisions for the establishment of a separate policy board of 24 members, the National Assessment Governing Board. The Governing Board was to be of similar composition to the Assessment Advisory Committee (specifying the additional inclusion of two curriculum specialists, a non-public educator, two governors, and an ex officio member). It also included a requirement to set feasible achievement goals – achievement levels, as they have come to be called. The 1994 reauthorization of ESEA, Improving America’s Schools Act, updated the membership of the Board to 26 by adding one more test and measurement expert and delineating the general public representatives as including two parent representatives (one additional). The 2001 reauthorization of ESEA required state participation in NAEP Reading and Mathematics if the state received Title I funds, and called for biennial testing of Reading and Mathematics, as well as the school accountability provision known as adequate yearly progress. The content and all aspects of NAEP were now being scrutinized much more strenuously. A 2003 authorization of the NAEP legislation provided for the voluntary inclusion of urban district-level reports, and included additional funding for their participation which increased from six in 2003 to 27 presently. The 2015 reauthorization of ESEA, the Every Student Succeeds Act (ESSA), maintained the requirements for NAEP, including required state participation and biennial testing in Reading and Mathematics. 	<p>The National Assessment Governing Board was established.</p> <p>The 1988 legislation included provisions for trial assessments in mathematics at 8th grade (1990) and 4th and 8th grade (1992) and in reading at 4th grade (1992).</p> <p>The first assessment frameworks were developed for these grades/subject areas.</p> <p>The policy and practices for developing the NAEP Assessment Frameworks was now the responsibility of the Governing Board.</p>

Appendix B

Governing Board Duties in Legislation Over Time

The National Assessment Governing Board was authorized by Federal legislation in 1988 and has been reauthorized twice. The duties of the National Assessment Governing Board were initially authorized in the legislation establishing the Board in 1988 and have remained quite stable throughout the periodic reauthorizations, the latest of which is P.L.107-279 (2002).⁹ This law provides authorization for both the Governing Board (Section 302) and NAEP (Section 303). Appendix B presents only the Governing Board section, but does contain references to the NAEP section.

In each iteration of the law the subsections have been rearranged slightly and language was added, deleted or clarified. The requirements, however, have remained essentially the same. Two unique elements were added in 2002. The first, 302(e)(1)(D), called for an inclusive review process for the assessment that is now addressed both by a Governing Board policy (NAGB, 2002i)¹⁰ and by the extensive external reviews conducted before each framework is adopted. The other addition, 302(e)(1)(F), provided a linkage to the NAEP section. Appendix B presents all of the legal requirements in a side-by-side arrangement. Each requirement is presented with the legal numbering used in each reauthorization and identifies changes that occurred in each revision.

Appendix B Governing Board Duties in Legislation Over Time (New wording is underlined. Notes in red are not included in the legislation.)		
1988 P.L. 100-297 SEC. 3403. (6)(A)	1994 P.L. 103-382 SEC. 412 (e)(1)	2002 P.L. 107-279 SEC. 302. (e)(1)¹¹
6(A) In carrying out its functions under this subsection, the Board shall be responsible for—	(1) In General. -- In carrying out its functions under this section the Board shall—	(1) IN GENERAL - In carrying out its functions under this section the Assessment Board shall—
(i) selecting subject areas to be assessed (consistent with paragraph (2)(A));	(A) select subject areas to be assessed (consistent with section 411(b)(1));	(A) select the subject areas to be assessed (consistent with section 303(b));

⁹ The 1988 authorization, Public Law 100-297, was part of the *Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988*. The 1994 reauthorization, Public Law 103-382, was part of the *Improving America's Schools Act of 1994*.

¹⁰ The Governing Board policy statement, *Review of the National Assessment of Educational Progress*, adopted August 3, 2002, included six guiding principles that describe expectations for the rigorous review of the National Assessment of Educational Progress and actions of the Governing Board.

¹¹ Public Law 107-279, the Education Sciences Reform Act of 2002, provided amendments to the original No Child Left Behind Act of 2002, Public Law 107-110.

Appendix B Governing Board Duties in Legislation Over Time (New wording is underlined. Notes in red are not included in the legislation.)		
1988 P.L. 100-297 SEC. 3403. (6)(A)	1994 P.L. 103-382 SEC. 412 (e)(1)	2002 P.L. 107-279 SEC. 302. (e)(1)¹¹
(ii) identifying appropriate achievement goals for each age and grade in each subject area to be tested under the National Assessment;	(B) <u>develop appropriate student performance levels as provided in section 411(e);</u>	(B) develop appropriate student <u>achievement</u> levels as provided in section 303(e);
(iii) developing assessment objectives; (iv) developing test specifications;	(C) develop assessment objectives and test specifications <u>through a national consensus approach which includes the active participation of teachers, curriculum specialists, local school administrators, parents, and concerned members of the public;</u> Note: Consensus process was incorporated here from 1998 section (E).	(C) develop assessment objectives <u>consistent with the requirements of this section</u> and test specifications <u>that produce an assessment that is valid and reliable, and are based on relevant widely accepted professional standards;</u> Note: Reference to a consensus approach was moved from the NAGB, Section 302, to the NAEP Section 303(b)(3)(B)(II) but still applies to the content of NAEP for which the Board is responsible.
		(D) <u>develop a process for review of the assessment which includes the active participation of teachers, curriculum specialists, local school administrators, parents, and concerned members of the public;</u>
(v) designing the methodology of the assessment;	(D) design the methodology of the assessment, <u>in consultation with appropriate technical experts, including the Advisory Council established under section 407;</u>	(E) design the methodology of the assessment <u>to ensure that assessment items are valid and reliable,</u> in consultation with appropriate technical experts in measurement and <u>assessment, content and subject matter, sampling, and other technical experts who engage in large scale surveys;</u>

Appendix B Governing Board Duties in Legislation Over Time (New wording is underlined. Notes in red are not included in the legislation.)		
1988 P.L. 100-297 SEC. 3403. (6)(A)	1994 P.L. 103-382 SEC. 412 (e)(1)	2002 P.L. 107-279 SEC. 302. (e)(1)¹¹
		(F) consistent with section 303, <u>measure student academic achievement in grades 4, 8, and 12 in the authorized academic subjects;</u>
(vi) developing guidelines and standards for analysis plans and for reporting and disseminating results;	(E) develop guidelines and standards for analysis plans for reporting and disseminating results;	(G) develop guidelines for reporting and disseminating results; Note: 'Standards for analysis plans' was removed from this section.
(vii) developing standards and procedures for interstate, regional and national comparisons; and	(F) develop standards and procedures for interstate, regional, and national comparisons; and	(H) develop standards and procedures for regional and national comparisons; Note: 'interstate' was removed from this section.
(viii) taking appropriate actions needed to improve the form and use of the National Assessment.	(G) take appropriate actions needed to improve the form and use of the National Assessment.	(I) take appropriate actions needed to improve the form, <u>content, use, and reporting of results of any assessment authorized by section 303 consistent with the provisions of this section and section 303;</u> and
		(J) <u>plan and execute the initial public release of National Assessment of Educational Progress reports. The National Assessment of Educational Progress data shall not be released prior to the release of the reports described in subparagraph (J).</u>

Appendix B Governing Board Duties in Legislation Over Time (New wording is underlined. Notes in red are not included in the legislation.)		
1988 P.L. 100-297 SEC. 3403. (6)(A)	1994 P.L. 103-382 SEC. 412 (e)(1)	2002 P.L. 107-279 SEC. 302. (e)(1)¹¹
(B) The Board may delegate any functions described in subparagraph (A) to its staff.	(2) Delegation. -- The Board may delegate any <u>of the Board's procedural and administrative functions</u> to its staff.	(2) DELEGATION - The Assessment Board may delegate any of the Assessment Board's procedural and administrative functions to its staff.
(C) The Board shall have final authority on the appropriateness of cognitive items.	(3) Cognitive Items. -- The Board shall have final authority on the appropriateness of cognitive items.	(3) <u>ALL COGNITIVE AND NONCOGNITIVE ASSESSMENT ITEMS</u> - The Assessment Board shall have final authority on the appropriateness of <u>all assessment</u> items.
(D) The Board shall take steps to ensure that all items selected for use in the National Assessment are free from racial, cultural, gender, or regional bias.	(4) Prohibition Against Bias. -- The Board shall take steps to ensure that all items selected for use in the National Assessment are free from racial, cultural, gender, or regional bias.	(4) PROHIBITION AGAINST BIAS - The Assessment Board shall take steps to ensure that all items selected for use in the National Assessment are free from racial, cultural, gender, or regional bias <u>and are secular, neutral, and non-ideological.</u>
(E) Each learning area assessment shall have goal statements devised through a national consensus approach, providing for active participation of teachers, curriculum specialists, local school administrators, parents and concerned members of the general public.	(5) <u>Technical -- In carrying out the duties required by paragraph (1), the Board may seek technical advice, as appropriate, from the Commissioner and the Advisory Council on Education Statistics and other experts.</u> <u>Note: The stakeholder list and consensus approach were moved to Section 412 (e)(1)(C).</u>	(5) TECHNICAL - In carrying out the duties required by paragraph (1), the Assessment Board may seek technical advice, as appropriate, from the Commissioner for Education Statistics and other experts.

<p align="center">Appendix B Governing Board Duties in Legislation Over Time (New wording is underlined. Notes in red are not included in the legislation.)</p>		
<p align="center">1988 P.L. 100-297 SEC. 3403. (6)(A)</p>	<p align="center">1994 P.L. 103-382 SEC. 412 (e)(1)</p>	<p align="center">2002 P.L. 107-279 SEC. 302. (e)(1)¹¹</p>
	<p>(6) Report. -- Not later than 90 days after an evaluation of the student performance levels under section 411(e), the Board shall make a report to the Secretary, the Committee on Education and Labor of the House of Representatives, and the Committee on Labor and Human Resources of the Senate describing the steps the Board is taking to respond to each of the recommendations contained in such evaluations.</p>	<p>(6) REPORT - Not later than 90 days after an evaluation of the student achievement levels under section 303(e), the Assessment Board shall make a report to the Secretary, the Committee on <u>Education and the Workforce</u> of the House of Representatives, and the Committee on <u>Health, Education, Labor, and Pensions</u> of the Senate describing the steps the Assessment Board is taking to respond to each of the recommendations contained in such evaluation.</p> <p>Note: This change provides an update to the House and Senate Committee names at the time.</p>

Appendix C

Framework Development Policy Revision 2002 to 2018

The NAGB Framework Development Policy was developed initially in 2002 and revised 16 years later in 2018. The original policy was based on the accepted best practice NAGB had been following since 1988. Although many changes occurred in assessment methodologies and education policy, the 2002 policy served the Board well, even with some redundancies and procedural details not usually found in policies. Revisions to the Framework Development Policy in 2018 addressed these issues.

In addition to some minor reorganization and rewording, primary distinctions between the 2002 and 2018 editions included four changes that are discussed in more detail within this report: (1) updating frameworks, (2) reviewing frameworks, (3) participants/stakeholders, and (4) framework panels/committees. Additionally, the current policy maintains a focus on the overarching principles to be followed, with the details and procedures moved to procedural documents and requirements for contractors.

Basically, the two versions address the same content, although they are arranged somewhat differently and with fewer procedural elements in 2018. The summary below compares the principles in each version, in a side-by-side manner, and summarizes the changes that were implemented in 2018 (**shown in red**). Italicized words show *2002 language that was changed* and underlining shows new wording in 2018. Of course, this summary does not capture all changes as the text under each principle also was revised in a similar manner to remove redundancy and procedures, and for more clarity and efficiency in wording. A few are noted in the table. The only substantive change is the addition of a framework update process which is not intended to be as extensive as the development of a new framework.

Policy Elements	5/18/02 Framework Development Policy	03/18/18 Framework Development Policy
Preface: Purpose	It is the policy of the National Assessment Governing Board to conduct a comprehensive, inclusive, and deliberative process to determine the content and format of all subject area assessments under the National Assessment of Educational Progress (NAEP).	No change.
Preface: Desired Outcome	Objectives developed and adopted by the Governing Board as a result of this process shall be used to produce NAEP assessments that are valid and reliable, and that are based on widely accepted professional standards. <i>The process shall include the active participation of educators, parents, and members of</i>	The primary result of this process shall be an assessment framework (hereafter, “framework”) with objectives to guide development of NAEP assessments for students in grades 4, 8, and 12 that are valid, reliable, and reflective of widely accepted professional standards.

Policy Elements	5/18/02 Framework Development Policy	03/18/18 Framework Development Policy
	<i>the general public</i> . The primary result of this process shall be an assessment framework to guide NAEP development at grades 4, 8, and 12.	Rewording & reorganization of italicized details.
Preface: Process	<i>The process shall include the active participation of educators, parents, and members of the general public.</i>	This process detail is contained in the introduction and in Principle 2.
Preface: Board Delegation to ADC	The Governing Board, through its Assessment Development Committee, shall <i>carefully</i> monitor the framework development process to ensure <i>that all Governing Board policies are followed; that the process is comprehensive, inclusive, and deliberative; and that the final Governing Board-adopted framework, specifications, and background variables documents are congruent with the Guiding Principles, Policies, and Procedures that follow.</i>	The Governing Board, through its Assessment Development Committee, shall monitor the framework development and update processes to ensure that the final Governing Board-adopted framework, specifications, contextual variables documents, and their development processes comply with all principles and guidelines of the Governing Board Framework Development Policy. Rewording, reorganization of italicized details.
Intro: Legal Authorization	P.L. 107-279 Section 302(e)(1) and Restatement of law requirements.	No change in citation, but requirements not explicitly listed.
Intro: Involvement of Stakeholders	Stakeholders were given in the restatement of the law.	Expanded description of compliance with the law and identification of specific stakeholders.
Intro: Professional Standards	Adherence to standards acknowledged with current publications cited.	No change except for the editions cited.
The Principles	Seven (7) principles included with <i>policies and procedures</i> for implementing each. Order is shown in relation to the 2018 policy.	Six (6) principles included with <u>guidelines</u> for implementation. Essentially the same principles and guidelines as in 2002 (with some combining and rewording), titles were added to each principle.
	1. The Governing Board is responsible for developing an <i>assessment</i> framework for each NAEP subject area. The framework shall define the scope of the domain to be measured by delineating the knowledge and skills to be tested at each grade, the format of the NAEP assessment, and preliminary achievement level descriptions. 5. <i>Through the framework development process, preliminary</i>	1. <u>Elements of Frameworks:</u> The Governing Board is responsible for developing a framework for each NAEP assessment. The framework shall define the scope of the domain to be measured by delineating the knowledge and skills to be tested at each grade, the format of the NAEP assessment, and the achievement levels. <u>Define what will be tested and how, as well as</u>

Policy Elements	5/18/02 Framework Development Policy	03/18/18 Framework Development Policy
	<p><i>achievement level descriptions shall be created for each grade being tested. These preliminary descriptions shall be an important consideration in the item development process and will be used to begin the achievement-level-setting process.</i></p>	<p><u>how much students should know at each achievement level.</u></p> <p>2002 Principle 5 incorporated with this principle.</p>
	<p>2. The Governing Board shall develop an assessment framework through a comprehensive, inclusive, and deliberative process that involves the active participation of <i>teachers, curriculum specialists, local school administrators, parents, and members of the public.</i></p> <p>(Note: This 2002 principle contained guidelines for panel members which did not explicitly require classroom experience for the subject area. “At least 30 percent of this committee shall be composed of users and consumers in the subject area under consideration.”)</p>	<p>2. <u>Development and Update Process:</u> The Governing Board shall develop and update frameworks through a comprehensive, inclusive, and deliberative process that involves active participation of stakeholders.</p> <p>Addition of ‘update’; redundancy in wording reduced; and move of stakeholders list to the introduction. This principle more clearly identified the various panels, their purposes, shared membership expectation, classroom teaching experience (20%) in the subject area, and expected discussions about the impact on trend reporting when content changes.</p>
	<p>7. <i>NAEP assessment frameworks and test specifications generally shall remain stable for at least 10 years.</i></p>	<p>3. <u>Framework Review:</u> Reviews of existing frameworks shall determine whether an update is needed to continue valid and reliable measurement of the content and cognitive processes reflected in evolving expectations of students.</p> <p>The addition of this principle provides an emphasis on the work of reviewing/updating frameworks and contains guidelines about reviewing/updating frameworks at least once every 10 years.</p>
	<p>3. The framework development process shall take into account state and local curricula and assessments, widely accepted professional standards, exemplary research, international standards and</p>	<p>4. <u>Resources for the Process:</u> Framework development and update processes shall take into account state and local curricula and assessments, widely accepted professional standards, exemplary research, international standards</p>

Policy Elements	5/18/02 Framework Development Policy	03/18/18 Framework Development Policy
	assessments, and other pertinent factors and information.	and assessments, and other pertinent factors and information. Addition of 'update'. This principle contains expanded guidance on ways to identify curricular content issues in the field.
	6. The specifications document shall be developed <i>during the framework process</i> for use by NCES and the test development contractor as the blueprint for constructing the NAEP assessment and items <i>in a given subject area</i> .	5. <u>Elements of Specifications:</u> The specifications document shall be developed for use by NCES as the blueprint for constructing the NAEP assessment and items. Reduce unnecessary words.
	4. The Governing Board, through its Assessment Development Committee, shall <i>closely monitor all steps in the framework development process</i> . The result of this process shall be recommendations for Governing Board action in the form of three key documents: the assessment framework; assessment and item specifications; and <i>background</i> variables that relate to the subject being assessed.	6. <u>Role of the Governing Board</u> The Governing Board, through its Assessment Development Committee, shall monitor all framework development <u>and updates</u> . The result of this process shall be recommendations for Governing Board action in the form of three key documents: the framework; assessment and item specifications; and <u>contextual</u> variables that relate to the subject being assessed. Addition of 'update' & change of term from background to contextual variables. This principle contains guidelines about balancing the maintenance of trends with including new content.

Appendix D

Decision Points and Roles for Framework Development

Appendix D highlights the major questions/decisions and other subordinate ones needed for framework development, approval, and adoption by the Board. Also included are the likely roles and involvement of contractors and external reviewers, that is, stakeholders and the general public. Many smaller decisions and steps are behind these major decision points, but cannot be captured in this simplistic presentation. While the decision points are presented in an orderly manner, they may not always be implemented in the chronology implied by this list.

Appendix D				
Decision Points and Roles for Framework Development				
Activity	Full Board	Assessment Development Committee*	Contractor Activities	External Reviews
① Should a framework revision or updating be considered?		<ul style="list-style-type: none"> - Identify need for review - Recommend going forward with review 		
Experts make presentations to the Assessment Development Committee.		<ul style="list-style-type: none"> - Convene experts - Review relevant research 		
Formulate a recommendation about update/replacement of framework and draft charge		<ul style="list-style-type: none"> - Formulate recommendation - Draft charge 		
② Is a new framework or update needed?	Review-Approve charge			Via public information and open meetings
Conduct procurement and select contractor to manage workload		<ul style="list-style-type: none"> - Issue procurement - Review proposals - Initiate contract - Monitor* 	<ul style="list-style-type: none"> - Begin contract and implement as required 	Via public postings and notices
<u>Visioning Panel Deliberations</u> (includes Development Panel members) <u>Purpose:</u> to provide the initial high-level guidance about the state of the discipline and recommendations (guidelines or goals) for developing the framework		<ul style="list-style-type: none"> - Review/approve panels - Provide charge & direction - Review guidelines and goals - Regularly monitors progress* 	<ul style="list-style-type: none"> - Identify panel chair & participants - Facilitate process - Regularly reports progress 	

Appendix D
Decision Points and Roles for Framework Development

Activity	Full Board	Assessment Development Committee*	Contractor Activities	External Reviews
<u>Development Panel Deliberations</u> (overlap with Visioning Panel) <u>Purpose:</u> to draft the three project documents, engage in the detailed deliberations about how issues outlined by the Visioning Panel should be reflected in the framework.		<ul style="list-style-type: none"> - Regularly monitors progress* 	<ul style="list-style-type: none"> - Identify panel chair & participants - Facilitate process - Regularly reports progress 	
<u>Technical Experts Involved</u> <u>Purpose:</u> to uphold the highest technical standards and as a resource to the framework panels to respond to technical issues raised during panel deliberations.		<ul style="list-style-type: none"> - Participate as needed* - Regularly monitors progress 	<ul style="list-style-type: none"> - Identify participants - Facilitate process - Produce reports 	
<p>③ Is the draft framework ready to be evaluated by external reviewers? Public comment will be sought from various segments of the population to reflect many different views, and targeted feedback will be solicited from those employed in the content area under consideration, especially educators and policy makers.</p>		<ul style="list-style-type: none"> - Regularly monitors progress* - Recommend going forward with external review and public comment 	<ul style="list-style-type: none"> - Provide drafts & make revisions - Produce reports 	Via public information and open meetings
<u>Framework</u> – Define what, how and how much of the content domain is to be included on the NAEP assessment, and desirable levels of achievement		<ul style="list-style-type: none"> - Monitor* - Approve 	<ul style="list-style-type: none"> - Facilitate process - Produce reports 	
<p>④-What feedback should be incorporated in Framework? The Framework Development Project must consider the policy impact and provide advice about changes needed based on the feedback, weighing all of the issues.</p>		<ul style="list-style-type: none"> - Recommend activities -- Participate in activities - Review feedback - Recommend next steps 	<ul style="list-style-type: none"> - Identify participants - Facilitate process -- Incorporate feedback - Produce reports 	Provide verbal and written comments about the framework & other issues

Appendix D
Decision Points and Roles for Framework Development

Activity	Full Board	Assessment Development Committee*	Contractor Activities	External Reviews
<p>⑤ Should the framework be adopted and implemented? After considering the revisions made to the framework, the Board formally adopts the framework and approves the next steps.</p>	<p>- Review - Approve or modify</p>	<p>- Recommend adoption - Identify next steps (item specification and contextual variables)</p>		
<p>5.2 (Later) <u>Item specifications</u> – the blueprint for constructing the NAEP assessment in sufficient detail for developing high-quality questions based on the framework.</p>	<p>- Review - Approve or modify</p>	<p>- Monitor* - Approve</p>	<p>- Facilitate process - Produce reports</p>	
<p>5.2 (Later) <u>Contextual variables</u> – recommendations on related contextual variables to be collected from students, teachers, and school administrators.</p>	<p>- Review - Approve or modify</p>	<p>- Monitor* - Approve</p>	<p>- Facilitate process - Produce reports</p>	
<p><u>Implement Assessment in collaboration with NCES.</u></p>		<p>- Monitor* - Approve items</p>	<p>NCES contractors</p>	

* Although the Assessment Development Committee has the primary role for oversight of framework development/updating processes, other committees of the Board and NCES are involved as needed. Typically, the Committee on Standards, Design, and Methodology (COSDAM) is involved in technical issues (scoring, scaling, trend reporting, etc.), the Reporting and Dissemination Committee (R & D) is involved in discussions about reporting and contextual data collection, and the National Center for Education Statistics (NCES) is involved in issues related to item development, test construction, test scoring, data analysis, and reporting.

Appendix E - Statement of Work Table of Contents
(Extracted as is from the cited RFP)

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Attachment A: Statement of Work

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