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Developing NAEP Frameworks:

A Look Inside the Process

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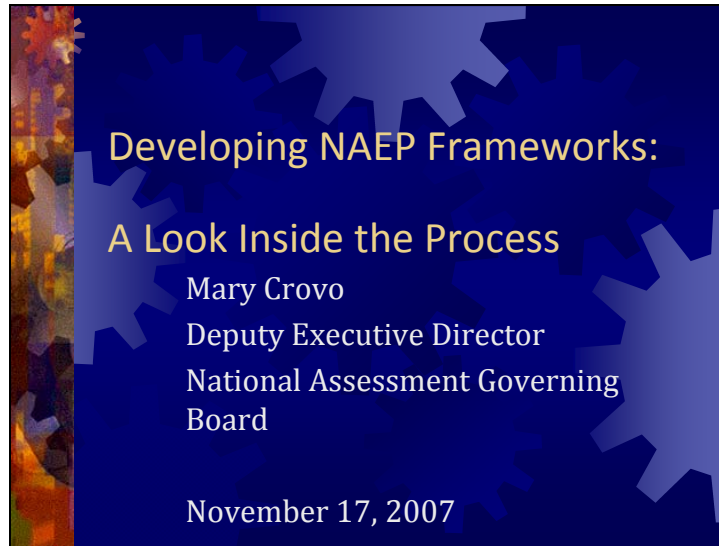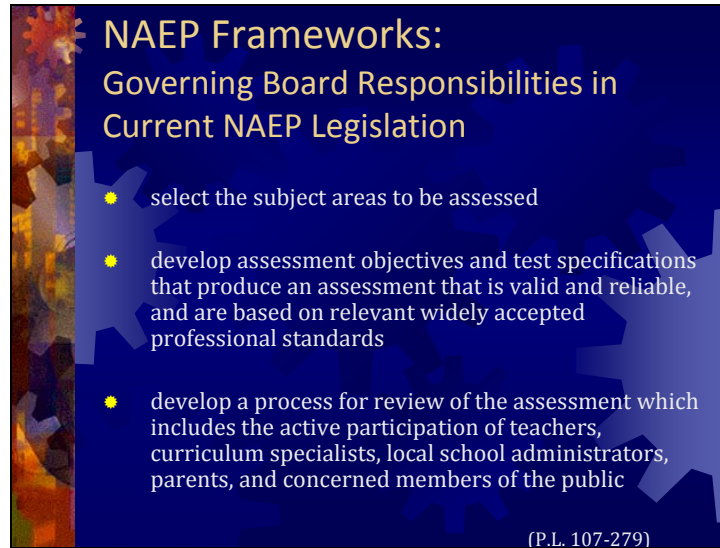National Assessment Governing Board

November 17, 2007

Today's presentation focuses on developing NAEP frameworks.

NAEP frameworks involve a large number of groups and individuals from across our nation. That is one reason why the Board believes NAEP frameworks represent the Gold Standard.
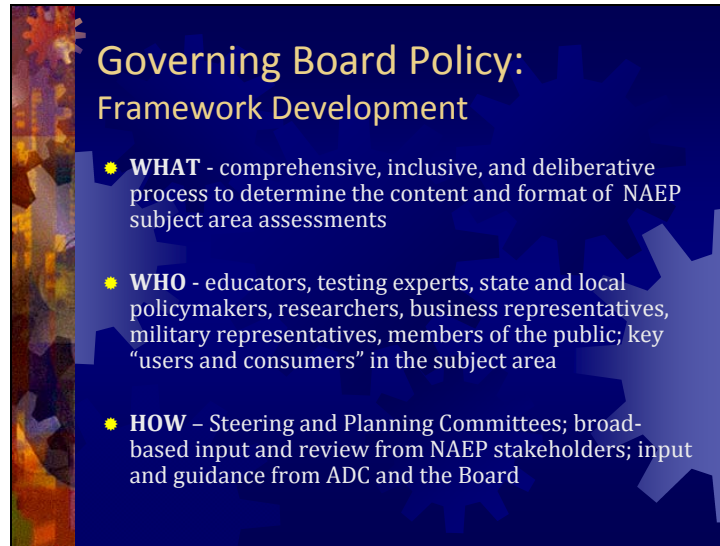
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NAEP Frameworks:
Governing Board Responsibilities in
Current NAEP Legislation

- select the subject areas to be assessed

- develop assessment objectives and test specifications that produce an assessment that is valid and reliable, and are based on relevant widely accepted professional standards

- 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

(P.L. 107-279)

Congress has assigned to the Board specific policy responsibilities for NAEP. Based on the legislation, the Board created a Policy for Framework Development. The policy describes the framework development process and participants. Listed here are key provisions in the law which guide the Board in determining what NAEP tests and how the assessments are designed.

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Framework development is a comprehensive, inclusive, and deliberative process which takes about 18 months, ensuring a high quality product.

A wealth of information is examined by a large and diverse group of people. A broad net is cast to strive for a diversity of perspectives: classroom teachers, principals, business representatives, local and state policymakers, testing experts, subject area researchers, and others.

These individuals are represented in two broad-based committees critical to the process: the Steering Committee provides oversight and the Planning Committee drafts and refines the framework.

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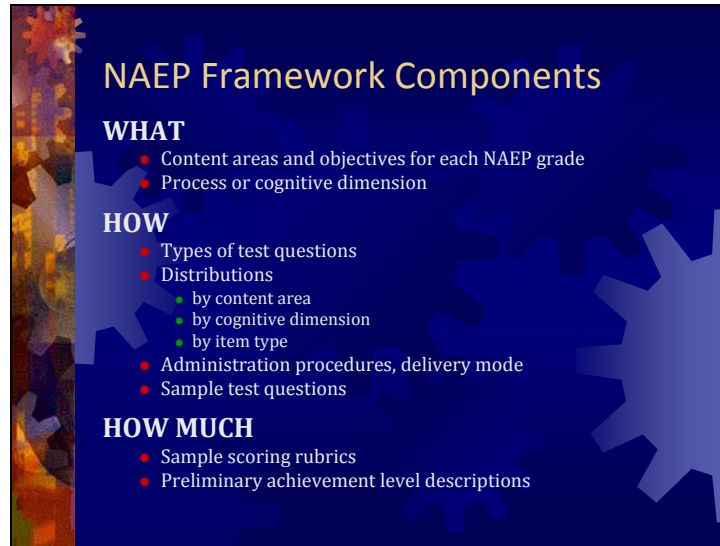Overview of the NAEP Framework Process
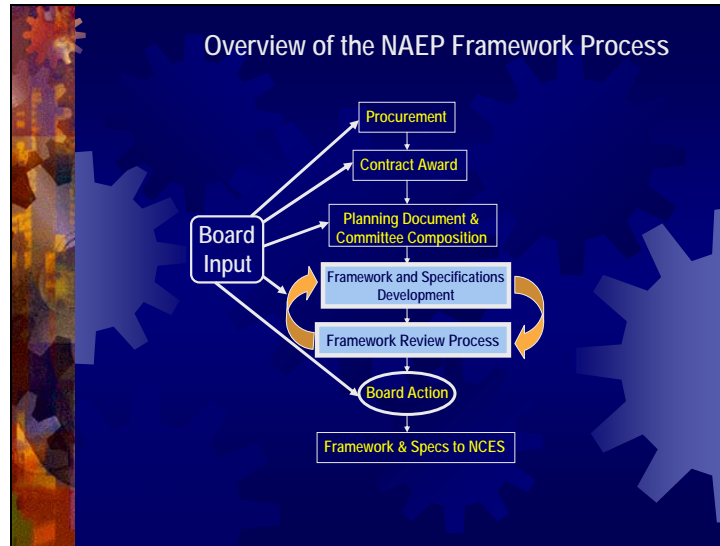
Here is a graphic depicting major steps in developing a NAEP framework.

A competitive bidding process is conducted for each framework project. With the limited number of Board staff, an outside contractor assists in the framework development process.

Prospective framework committee members are nominated by Board members and many outside sources. Committee members include renowned subject area experts on the cutting edge of cognitive research and instructional practice.

A detailed planning document or work plan guides each project, and then project committees are formed. The project committees meet and begin to develop the framework and specifications. This is an iterative process that involves tremendous outreach and review.

The framework and specifications are presented to the Board for formal action and the final documents are delivered to the National Center for Education Statistics to begin developing the test items.

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NAEP Framework Components

WHAT
- Content areas and objectives for each NAEP grade
- Process or cognitive dimension

HOW
- Types of test questions
- Distributions
  - by content area
  - by cognitive dimension
  - by item type
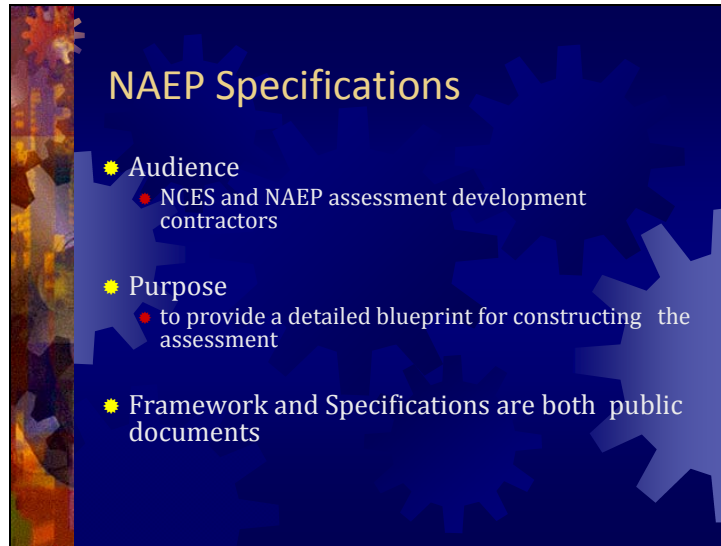- Administration procedures, delivery mode
- Sample test questions

HOW MUCH
- Sample scoring rubrics
- Preliminary achievement level descriptions

Frameworks define the content and format for NAEP assessments. They describe what is measured; what knowledge and skills students are expected to have at fourth, eighth, and twelfth grades; and the content and cognitive dimensions of each assessment subject area.

Frameworks also define how the assessment should be designed, the kinds of test questions (multiple choice or constructed response) and how much time is allocated to each type. The content area distributions are allocated to determine the percentage of the assessment devoted to specific parts of the subject area– for example, literary and informational text in reading, or algebra and geometry in math.

Frameworks guide item development and provide preliminary descriptions for basic, proficient, and advanced levels of knowledge for the content areas. Sample scoring rubrics are developed and numerous sample items are included to illustrate each component of the framework.
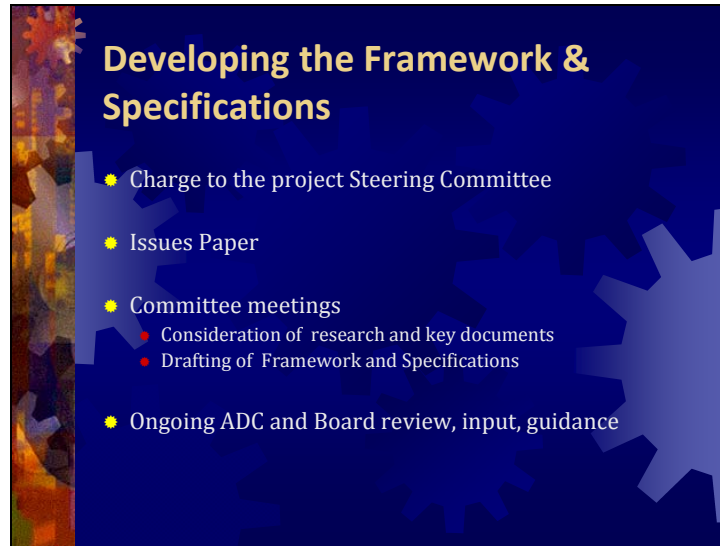
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The companion to the framework is the specifications document. Similar to electrical and mechanical blueprints for constructing a building, the specifications document is the detailed blueprint for how to build a NAEP assessment. It is a technical document containing many sample items. The audience for this document is the National Center for Education Statistics (NCES) and NAEP test developers. They will use this technical document to develop the NAEP assessment.

Both the framework and specifications are documents accessible to the public.

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Developing the Framework & Specifications

- ☀ Charge to the project Steering Committee

- ☀ Issues Paper

- ☀ Committee meetings
  - • Consideration of research and key documents
  - • Drafting of Framework and Specifications

- ☀ Ongoing ADC and Board review, input, guidance

Regarding the development of the framework and specifications, the Board first gives the "charge" to the project Steering Committee. We typically invite a Board Member to address the Steering Committee to deliver the charge, set the tone, and discuss the importance of the work and the role of the Board throughout the process.

The project committees start by discussing a comprehensive Issues Paper, which serves as the initial springboard for the framework discussions by posing questions and citing research on key issues related to the subject area. All issues, pros and cons, are presented in the Issues Paper for the project committees to consider. In developing the NAEP Writing Framework, for example, the Issues Paper focused on important types of writing to be considered (such as informational and persuasive), the possibility of computer based assessment, methods of scoring, and other topics for the framework deliberations. The Issues Paper is usually authored by one or more prominent researchers in the subject area.

Project committee meetings occur during the entire course of the project, usually for 2-3 days every 3 months and also involve teleconferences, WebEx sessions, and other online collaboration. The committee members roll up their sleeves, examine various background documents, and begin to craft the framework.

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Framework Process Balances Consideration of:

Research and Best Practice
* Research on student learning, cognitive development and assessment
* Current instructional and measurement issues
* Curricular reform efforts

Standards and Assessments
* State standards and assessments
* International standards and assessments
    (e.g., PIRLS, PISA, TIMSS)
* Professional association standards
    (e.g., national content standards)

During the framework development, the Committees review a huge amount of background material. A partial listing is provided on this slide. Of course, they bring their own expertise and perspectives to the table. Some have been involved in international assessments, state assessments, research, and many different areas.

All of these documents are critical to informing the framework development, providing various perspectives, and helping to shape the final document. Standards, assessments, and various research articles are compiled, distilled, and examined very carefully. Considerable focus is on exemplary state standards; what states are doing in the realm of assessments; and what NAEP should be doing. National standards sometimes exist. Sometimes they are carefully considered; other times they are not as helpful. All of this shapes the final framework document.
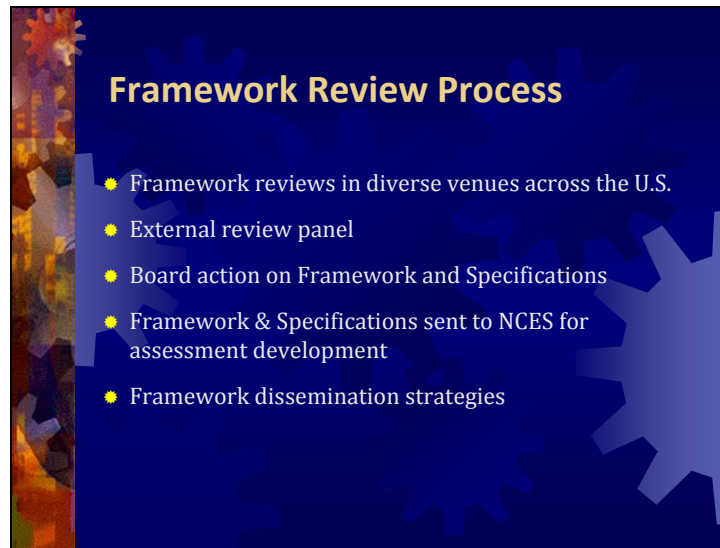
After the draft framework is developed, the framework review process begins. It is extensive and involves tremendous outreach. Public forums are held around the nation with a diverse array of constituents. Business people, testing directors, curriculum groups, students, and many others provide input on the draft framework. Again, these sessions are conducted in-person, via WebEx, and via other forums.

In public hearings, Board members listen to the testimony. Hundreds of emails are received once the framework is posted on the Internet, and many groups and individuals are asked to submit commentary. The goal is to cast a wide net and hear from as many groups as possible. At each successive feedback stage a revised framework draft is created.

Near the end of the process, an "External Review Panel" is engaged to review the draft framework and provide feedback. This is a small, prestigious group of leading researchers in the field who have not been involved in the framework development.   They provide an independent review of the draft framework.

Once the Board takes action on the framework and the specifications–usually at two successive meetings–the finalized documents are sent to the National Center for Education Statistics and disseminated in print and electronic form.

On the Board's website, anyone can place an online order for a framework and receive copies free of charge, or simply download the document.
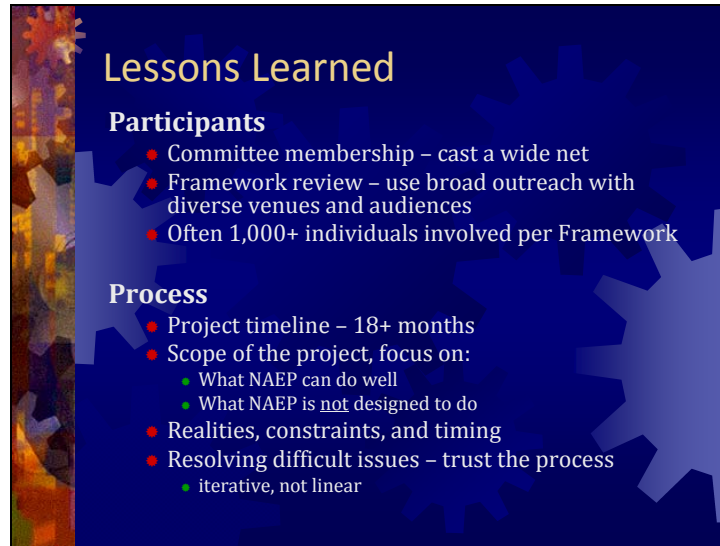
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Framework Process Balances
Consideration of (continued)

Other considerations
- Key documents having national or international significance
- Preparedness reports and research (grade 12)
- Previous NAEP Frameworks
- Following vs. leading the field
    (given 5-6 year NAEP development cycle)
    - Assessment content
    - Assessment format/delivery
    - Resources

Other considerations in the framework development process involve examining key documents of national and international importance, as well as reviewing previous NAEP frameworks. Another consideration is leading versus following the field. As you know, the NAEP cycle is about five or six years from framework development to actual test administration; thus, the framework is developed well in advance of the assessment. The Board wants to ensure that the framework is neither outdated by the time it hits the streets, nor too far ahead of the field in terms of the content, the assessment format, and the delivery mode.

Since NAEP frameworks remain in place for about ten years, stability is essential to measure progress over time. It is a challenge–the lifetime of a framework could be as much as 15 years.

Concerning our participants, we have to make sure that we cast a very broad net in the committee membership. The committees include classroom teachers and principals, but we go much broader. In the committee and review processes, the broad outreach can involve thousands of participants from diverse venues and audiences.
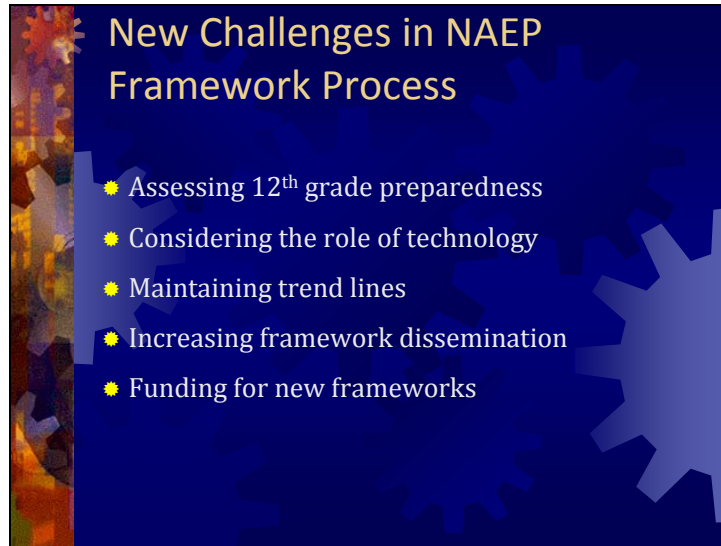
One lesson learned is that the framework process takes time and needs to be flexible and respond positively to revisions and new developments. Another lesson is that the Board has to focus on what NAEP can do and remain cognizant of what NAEP cannot do. There are many things in the curriculum that NAEP does not assess. For example, we cannot assess reading and responding to novels. We cannot assess long-term research projects in a science lab. We have a good proxy, but NAEP has some limitations, and there are realities, constraints, and timing issues that impact what a large scale assessment can do and do well. With 50 minutes of testing time, some tough choices have to be made.

Finally, the process has to be trusted; it is not linear or smooth. There are many iterative steps in developing a framework and resolving difficult issues along the way.

New challenges in the NAEP framework process continue. These issues are always on our quarterly meeting agendas as the Board's Committees work to address them–new challenges, new opportunities. But, the process is well grounded and something the Board should be very proud of.

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The NAEP framework process is ongoing and from time to time improvements are made to the process. The above NAEP and Governing Board websites will assist in keeping you abreast of the process and any changes made in the future.