

## **Governing Board's Preparedness Research Program**

For more than a decade, the Governing Board has been working on improving the form, function, and use of NAEP as an indicator of 12<sup>th</sup> graders' academic preparedness for postsecondary endeavors. During this May 2016 plenary session, Board members will be briefed on the purpose, history, major milestones, and current status of the Board's preparedness research program.

### **BACKGROUND**

Upon his retirement in late 2002, the Governing Board's first Executive Director, Roy Truby, charged the Board with reviewing and improving grade 12 NAEP. In early 2003, the Governing Board established the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting. The 18-member Commission, chaired by former Board members Mark Musick and Michael Nettles, issued a March 2004 [final report](#) that concluded:

**"It is crucial that NAEP's leaders change 12<sup>th</sup> grade NAEP to:**

- **provide 12<sup>th</sup> grade state level results, and**
- **report on readiness for college, training for employment, and entrance into the military"**

The Governing Board recognized that grade 12 NAEP had not necessarily been designed to support valid inferences related to students' academic preparedness; further study would be needed to explore the feasibility of this additional use for NAEP.

### **GOVERNING BOARD ACTIONS**

The Board took the following steps to begin exploring the feasibility of using NAEP to report on academic preparedness for postsecondary endeavors:

- Commissioned a series of papers to explore issues related to [methodology](#), [participation](#), and [motivation](#)
- Adopted a [Resolution](#) on Reporting on Preparedness of 12<sup>th</sup> Grade Students for College-Credit Course Work, Training for Employment, and Entrance into the Military
- Created an [Ad Hoc Committee](#) on Planning for NAEP 12<sup>th</sup> Grade Assessments
- Engaged Achieve, Inc. to review the grade 12 NAEP [Reading](#) and [Mathematics](#) Frameworks and make recommendations on redesigning them to report on 12<sup>th</sup> graders' preparedness for college, workforce training, and the military
- Made related revisions to the 2009 NAEP [Reading](#) and [Mathematics](#) Frameworks
- Added pilot administrations for the first-ever state assessments in NAEP Reading and Mathematics at grade 12 to the NAEP assessment schedule for 2009 and 2013
- Appointed a technical panel on 12<sup>th</sup> grade preparedness research

The 7-person Technical Panel on 12<sup>th</sup> Grade Preparedness Research, chaired by Michael Kirst of Stanford University, was charged with helping the Governing Board plan research studies to

support the validity of inferences for using grade 12 NAEP as an indicator of students' academic preparedness for postsecondary endeavors.

The 2008 [final report](#) of the Kirst panel recommended the following types of research studies:

Study Type	Key Question
Content alignment	Is the content of NAEP similar to other relevant tests, such as SAT, ACT, or ACCUPLACER?
Statistical relationship	How does performance on NAEP compare to performance on other tests?
Judgmental standard setting	What is the point on the NAEP scale that experts judge as <i>just</i> “academically prepared”?
Higher education survey	What are the tests and cut-scores used for placement in higher education?
Benchmarking	How do select groups—such as students in college or job training programs—perform on NAEP?

The Governing Board made the following decisions in implementing the preparedness research program:

- The term “**academic preparedness**” was used rather than “readiness” to indicate that NAEP was not intending to measure other characteristics needed for success in postsecondary endeavors beyond academic knowledge and skills.
- Academic preparedness for **college, job training**, and the **military** were not assumed to be the same; separate research strands were pursued for each outcome.
- The **working definition of academic preparedness for college** refers to the reading and mathematics knowledge and skills needed for placement into entry-level college credit courses that meet general education requirements, without the need for remedial coursework in mathematics or reading. This refers to both 4-year institutions (public and private) and 2-year institutions with degree-bearing programs designed to transfer to 4-year institutions.
- The **working definition of academic preparedness for job training programs** refers to the reading and mathematics knowledge and skills needed to qualify for a job training program without remediation in mathematics or reading.
- To operationalize job training programs, **five exemplar occupations** were selected for use in research studies: Automotive Master Technicians; Computer Support Specialists; Heating, Ventilation and Air Conditioning Technicians (HVAC); Licensed Practical Nurses (LPNs); and Pharmacy Technicians. The exemplar occupations were selected to represent jobs that do not require a 4-year degree and to represent job training programs that require equivalent reading and mathematics knowledge and skills to qualify for entry in both the **military and civilian sectors**.

## COMPREHENSIVE RESEARCH PROGRAM

Following the guidance of the Technical Panel on 12<sup>th</sup> Grade Preparedness Research, and under the direction of **COSDAM**, the Governing Board issued contracts to perform **many different research studies** from 2008 to the present **using multiple methods**. The studies focused on academic preparedness for college and/or job training programs; the Governing Board was unable to secure the needed partnerships to investigate academic preparedness for the military.

The studies explored many different angles to the question of whether it was feasible to use NAEP as an indicator of academic preparedness for college and job training programs. Many of the studies led to the exploration of new research questions, and some of the intended studies turned out to be infeasible. Most of the completed studies were either content alignment studies (where the content of NAEP was compared to relevant tests) or statistical relationship studies (where performance on NAEP was compared to other relevant tests).

Results from these studies are available on the Governing Board's [Technical Report on NAEP 12<sup>th</sup> Grade Preparedness Research](#).

## EXTENSIVE OUTREACH

In 2010, the Governing Board appointed the [NAEP 12<sup>th</sup> Grade Preparedness Commission](#) to increase awareness of the importance of preparing students for postsecondary education or job training programs, as measured by NAEP. The 10-member Commission, chaired by former Governor **Ronnie Musgrove**, was designed to:

- Study and organize the results from the Governing Board's extensive research program
- Develop a communication strategy to direct attention to the results and findings
- Communicate the results to the public, policymakers, educators, and potential employers
- Conduct meetings, organize presentations, hold public hearings, and meet with people

From 2011 to 2013, the Commission held **seven regional symposia** in [Sacramento](#); [Boston](#); [Nashville](#); [Jackson, MS](#); [Tallahassee](#); [Charleston, WV](#); and [Washington, DC](#). These events were attended by over 600 stakeholders and often included statements from elected officials and **television coverage** (videos and other materials are included on the website for each event). There was wide support for the NAEP academic preparedness initiative across leaders in K-12 and higher education, the business community, civil rights, and legislative policy. In video addresses to the Nashville and Washington, DC symposia, respectively, [Senator Lamar Alexander](#) and [Secretary of Education Arne Duncan](#) praised the use of NAEP as an indicator of academic preparedness.

Several current and former Board members participated in the symposia, including: David Alukonis, **Mitchell Chester**, David Driscoll, Chester Finn, **Anitere Flores**, **Ronnie Musgrove**, Mark Musick, Susan Pimentel, **Fielding Rolston**, Blair Taylor, and Darwin Winick.

## REPORTING ACADEMIC PREPAREDNESS FOR COLLEGE

- In August 2013, the Board reviewed the research findings and approved a [Resolution](#) to report the grade 12 NAEP reading and mathematics results in terms of **plausible estimates**

of the percentage of students who possess the reading and mathematics knowledge, skills, and abilities to be academically prepared for **college**.

- For grade 12 reading, the **Proficient cut score** (302) was used to estimate the percentage of students academically prepared for college.
- For grade 12 mathematics, a score of 163 (**in between the Basic cut score of 141 and the Proficient cut score of 176**) was used to estimate the percentage of students academically prepared for college.
- A [summary report](#) and [validity argument](#) were prepared in support of the inferences for providing **initial national estimates** of academic preparedness for college using the grade 12 NAEP reading and mathematics assessments.
- A separate [release event](#) was held on May 14, 2014 (one week after the release of the grade 12 Report Cards) to focus on the finding that 39% of grade 12 students in mathematics and 38% of grade 12 students in reading were academically prepared for college.
- The initial estimates were also used to report the 2015 grade 12 results in April 2016.

#### CURRENT STATUS/NEXT STEPS

- Research on using NAEP for **academic preparedness for job training programs** has been **inconclusive**, largely due to huge variability in the knowledge and skills required by different training programs within a single occupation, let alone across the five exemplar occupations. No work is currently underway for academic preparedness for job training; in 2015, the Governing Board released a [summary report](#) of lessons learned from the job training research.
- [Exploratory studies](#) using **grade 8 NAEP** to estimate the percentage of students **on track** to being academically prepared for college by the end of high school were performed in 3 states. The Board has not decided whether to pursue additional research at grade 8.
- **Additional research** (including longitudinal outcomes of students who took NAEP in grades 8 or 12) is ongoing in several states, along with a planned NAEP-ACT national linking study. Findings from these studies may be used to modify how academic preparedness for college is reported for the **2019** NAEP grade 12 Report Cards.
- The current [NAEP Assessment Schedule](#) no longer includes administration of the grade 12 assessments at the **state level** (due to budgetary constraints).
- The Governing Board's [preparedness technical report website](#) is currently being **redesigned** to better reach multiple stakeholder groups.
- **COSDAM** will continue to oversee the technical aspects of the academic preparedness research and will bring future topics to the full Board for continued discussion.



# The Nation's Report Card and 12th Grade Preparedness:

What Can the National Assessment of Educational Progress (NAEP) Tell Us About U.S. Students' Academic Preparedness?



## Why Grade 12?

Grade 12 is a critical transition point for U.S. students. When graduates leave high school, they will enter higher education, civilian or military training programs, or the workforce. Yet we currently don't know the extent of our 12th graders' academic preparedness.

### On a daily basis we know...

- ☒ The fluctuations in the stock market
- ☒ The number of bushels of wheat produced nationwide
- ☒ The price of an ounce of gold
- ☐ **Whether our nation's 12th graders are academically prepared for college and job training**

A high school diploma is important. But it cannot tell us whether students have the knowledge and skills to handle basic college coursework without remediation, or whether those entering job-training programs have the academic skills they need. We need more information in this area.

## Why NAEP?

NAEP is the only assessment representative of all U.S. 12th graders. As the gold standard for assessing student achievement, NAEP is uniquely positioned to serve as an indicator of 12th grade academic preparedness.

For the first time ever, the National Assessment Governing Board is pursuing a comprehensive program of research to discover how achievement on 12th grade NAEP relates to whether students have the mathematics and reading skills they need for their pursuits beyond high school.

Ultimately, the research and the NAEP results will be available for use by educators and policymakers as a measure of trends in the academic preparedness of our nation's 12th graders.

## What Does It Mean to Be Academically Prepared?

12th graders should have the knowledge and skills in reading and mathematics...



To qualify for placement into entry-level college credit courses that meet general education requirements, **without** the need for remedial coursework in mathematics or reading.



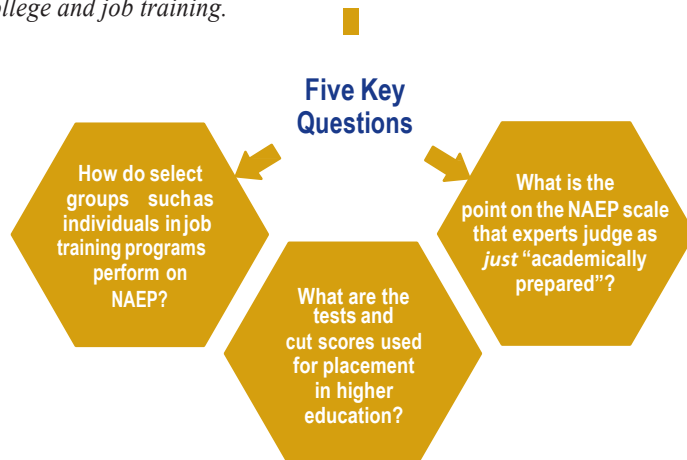
To qualify for a job-training program **without** remediation in mathematics or reading.



# ARE 12<sup>TH</sup> GRADERS PREPARED?

## Preparedness Research Questions

*More than 30 research studies, spanning five research areas, will address important links between NAEP and academic preparedness for college and job training.*



To see what the Governing Board has learned to date and for upcoming research results, visit [www.nagb.org/preparedness](http://www.nagb.org/preparedness).

## History of the Preparedness Initiative

**2002:** The Governing Board begins studying 12th grade NAEP and student achievement at the end of high school.

**2004:** National blue-ribbon panel recommends that 12th grade NAEP report on preparedness.

**2006:** NAEP is revised for college and job-training preparedness.

**2008:** Technical panel recommends series of research studies to report on 12th grade preparedness in reading and mathematics.

**2010:** Comprehensive program of research begins.

**2012:** Results of research studies to be released.

**2013:** Research will continue on academic preparedness for grade 12 NAEP.



## Find Out More

For a complete overview of the preparedness research to date, visit: [www.nagb.org/preparedness](http://www.nagb.org/preparedness)

## About NAEP

The National Assessment of Educational Progress (NAEP), also known as The Nation's Report Card, is the only continuing, nationally representative measure of achievement in core subjects at grades 4, 8, and 12. NAEP provides achievement results and reveals trends over time. For more information, visit [www.nationsreportcard.gov](http://www.nationsreportcard.gov).

## About the Governing Board

The National Assessment Governing Board is an independent, bipartisan organization created by Congress in 1988 to set policy for NAEP. The Board works to improve the reporting of results to make sure they are communicated effectively to a wide range of Americans and is committed to making NAEP an accessible, useful resource. For more information, visit [www.nagb.org](http://www.nagb.org).