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**To:** State Board of Education

**From:** Tom Watkins

**Date:** April 26, 2004

**Subject:** Report on the NAGB Plan for Grade 12 NAEP

When the National Assessment of Educational Progress (NAEP) began in 1969, only a national sample of students who were nine-, thirteen-, or seventeen-years old, of who were young adults (ages 26-35) took part in the annual assessment. Content areas such as mathematics, reading, writing, science, citizenship, visual arts, and music were sample tested using small samples of students selected from many states. Results were reported only for the overall national sample and disaggregated for broad sub-groups (region, socio-economic status, gender, and community type). Over the years, the young adult sample was dropped, the age-based samples gave way to grade-based ones (grades 4, 8, and 12), and state-NAEP and district-NAEP components were added. State-NAEP was first voluntary and then became required for grades 4 and 8 under the No Child Left Behind (NCLB) Act. District-NAEP is still voluntary at these grades (although districts also participate in samples for state- and national-NAEP).

A major concern with the grade 12 NAEP assessment is that it is administered in the winter of seniors' final year in school. It produces no student, school, district, nor state results (by Federal law). Do seniors take the test seriously? Do the results accurately depict the status of students as they leave high school? Because most educators and others believe that the answer to these questions is "no," concerns about what should be done with the grade 12 assessment have plagued NAEP since the switch to grade-based assessments (in the mid-1980's).

As a result, the National Assessment Governing Board (the independent, representative group that provides policy advice on NAEP to Congress and the U.S. Department of Education) appointed an eighteen-member commission to examine the purposes and role of the grade 12 assessment within NAEP. The group held several meetings, commissioned several papers, took testimony from several national organizations such as the Council of Chief State School Officers and experts, and considered options that ranged from moving the assessment to another grade, deleting it from NAEP, adding a state-level NAEP component, and so forth. In the end, the commission arrived at a series of recommendations about the future of the grade 12 NAEP assessment program.

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These include:

1. The National Assessment of Educational Progress (NAEP) should provide each state with results on the achievement of 12<sup>th</sup> graders. All states should participate in reading and mathematics assessments in grade 12 as they do now in grades 4 and 8.
2. NAEP should report 12<sup>th</sup> grade students' readiness for college-credit coursework, training for employment, and entrance into the military.
3. NAEP's leaders – the National Assessment Governing Board, the U.S. Department of Education, and the National Center for Educational Statistics – should develop and implement bold and dramatically new incentives to increase participation of high schools and 12<sup>th</sup> grade students in NAEP and the motivation of 12<sup>th</sup> grade students to do their best on NAEP.
4. NAEP 12<sup>th</sup> grade student achievement results should be given prominence in NAEP reports.
5. NAEP 12<sup>th</sup> grade transcript studies should be continued, the types of information collected should be expanded, and the dissemination of results should be improved.

The Commission not only recommended that the state-NAEP program be expanded to include the grade 12 NAEP assessment, more importantly, it recommended that the basis for the grade 12 assessments be altered from the current curriculum-based assessments that represent the culmination of K-12 work in subject areas such as mathematics and reading to an assessment based on frameworks that indicate a readiness for college academic success, for entry into employment or the military, or for success in other life roles. Hence, in the view of the commission, NAEP at grade 12 should be "forward-looking" in assessing student readiness for the next phase of their lives after high school, rather than "backward-looking" to see the culmination of their K-12 schooling experience.

There are, as you can imagine, significant challenges that lie before NAGB and NAEP to implement such a bold plan. First, success in college is not an easy concept to measure. College entrance tests predict end of freshman year academic success; they do not measure overall college completion nor success. Colleges and universities have historically resisted defining or measuring their success, so there is not a substantial body of data against which to build "predictive" measures.

Readiness for employment training is also elusive. While measures of work readiness and success, such as ACT's Work Keys have been developed, they are not widely used. Also, the skill levels required of different jobs, both those that students enter upon completion of high school and later, upon completion of a two-year or a four-year college, can vary widely. Hence, a broad set of measures will be needed to cover the full range of jobs and the training necessary to succeed in them.

Preparedness for the military will be somewhat easier to define, mainly because the primary measure now in use, the Armed Services Vocational Aptitude Battery (ASVAB) is now used not only in high schools but also is used upon entry into the military. Hence, the military probably has the best information to gauge student readiness to enter the armed services.

Perhaps the greatest challenge remaining for NAGB will be to motivate students to do well on the new grade 12 NAEP assessments. While the report urges the adoption of "bold and dramatically new incentives" for participation, unless those include something that affects the students themselves, this new plan may be fraught with the same

challenges of motivating students to do their best that face the current grade 12 NAEP assessment. The production of some sort of individual student report is the obvious way to perhaps motivate students, but this sort of reporting is not permitted by Federal law, and might be challenging to implement under the current NAEP design because students take only a small portion of the overall assessment used at any grade. While incentives or requirements for participation can build school-level participation, the student motivation remains the most serious issue in implementing this new plan. However, this plan to modify the grade 12 assessments is interesting and it remains to be seen whether NAEP can successfully implement it, and if it does so, whether such "forward-looking" assessment designs come to influence the manner in which states assess at the high school level within their statewide assessment programs.

Ms. Eileen Weiser is a member of the NAGB Board and will be able to offer her insights as well at the Board meeting.

# **12<sup>th</sup> Grade Student Achievement in America: A New Vision for NAEP**

**A Report to  
The National Assessment Governing Board**

**National Commission on  
NAEP 12<sup>th</sup> Grade Assessment and Reporting  
March 5, 2004**

## **Introduction**

Early in 2003, the National Assessment Governing Board established the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting, following the recommendation of retiring Governing Board Executive Director Roy Truby. The Governing Board's charge to the Commission was

“To review the current purpose, strengths, and weaknesses of 12<sup>th</sup> grade assessment and reporting by the National Assessment of Educational Progress (NAEP) and set forth recommendations for improvement to the National Assessment Governing Board.”

The Commission was instructed to focus on improvements needed for 12<sup>th</sup> grade NAEP and not on the status of high schools generally or the quality and rigor of the high school curriculum. The Commission has attempted to heed this guidance scrupulously.

Commission members were appointed by Darwin Winick, Chairman of the Governing Board. The eighteen Commission members were drawn from K-12 and higher education faculty and policymakers, the business community, and the military. Thus, the composition of the Commission includes both those who “produce” high school graduates and those who receive them (see Appendix A). The members have varying areas of expertise and a wide range of views, but share a common interest in the quality of the students produced by our nation's education systems.

Commission members' knowledge of NAEP prior to appointment ranged from very much to very little. However, over the course of the meetings, Commission members' familiarity with NAEP has increased and their appreciation of the singular role that NAEP plays in American education has deepened. The members of the Commission recognize NAEP's quality, integrity, and unique role as an independent, external measure of student achievement at the national and state levels (see Appendix B).

The Commission has met and deliberated five times since March 2003. It focused on answering the following question—What do we know about 12<sup>th</sup> grade achievement, what do we need to know, and what can NAEP provide? The Commission received expert testimony from twenty-four witnesses, commissioned and reviewed six white papers and two research studies, conducted a focus group with the Council of Chief State School Officers, and received comments on preliminary Commission recommendations from the National Association of State Boards of Education and Tennessee state education leaders (see Appendix C).

## **Time for Bold Action**

The Commission members have concluded that 12<sup>th</sup> grade NAEP should be redesigned. Twelfth grade NAEP has the potential to supply crucial information about student achievement that America needs and that is unavailable from any other source, but NAEP is not now fulfilling that potential. NAEP's leaders have an opportunity to invigorate 12<sup>th</sup> grade NAEP by making changes that would increase its relevance and usefulness to policymakers and the public.

The testimony of expert witnesses and the comments of state leaders in education and the business community were consistent, forceful, and persuasive. They told the Commission that (1) it is important to continue to report 12<sup>th</sup> grade NAEP results; (2) it is essential to expand state NAEP to include 12<sup>th</sup> grade, not just grades 4 and 8 as is the case now; and (3) it would be invaluable for NAEP to report on the readiness of 12<sup>th</sup> graders for college, training for employment, and entrance into the military.

State education leaders told the Commission that they want to know how well their 12<sup>th</sup> graders measure up academically and how ready they are for higher education and work world challenges they will face after high school. They want to compare the achievement of their 12<sup>th</sup> grade students to those in other states and have a national benchmark to compare against as well. State education leaders described this information about 12<sup>th</sup> graders as the “missing piece” that they presently do not have, but need, and said that only NAEP has the ability to provide this information.

State education leaders were insistent about the importance of this information because they know what is at stake. They reported to the Commission that about 45-55 percent of college freshmen entering 4-year and 2-year institutions are under-prepared for college-credit coursework and thus must be enrolled in non-credit, remedial courses in reading, writing, and mathematics. Students who are initially enrolled in remedial courses are the least likely to graduate from college and most likely to suffer the consequences of lessened employment opportunities and income in comparison to their peers with college degrees.

Armed with state-comparable information about the readiness of 12<sup>th</sup> graders for postsecondary pursuits, K-12 and postsecondary policymakers believe they will be better able to identify and address education problems. State policymakers also know that the quality of the education system and the readiness of the workforce are key factors business leaders consider. Having good information about 12<sup>th</sup> grade student achievement not only can help in making better education policy decisions, but can have an impact on the states’ long-range employment/economic outlook as well.

### **Summary: A New Vision for 12<sup>th</sup> Grade NAEP**

A bold, new vision for 12<sup>th</sup> grade NAEP is needed. The Commission members’ recommendations for 12<sup>th</sup> grade NAEP follow below. The changes proposed are substantive and significant. Some may require new legislation. Expanding state NAEP from grades 4 and 8 only to grades 4, 8, and 12 will require additional appropriations. It also will require dramatically new approaches for increasing school and student participation in NAEP at the high school level and enhancing the motivation of students to do their best in taking NAEP. Providing information about the readiness of 12<sup>th</sup> graders for college, training for employment, and entrance into the military will require revisions to NAEP test frameworks, test questions, achievement levels, and reporting procedures. Making these revisions, too, may require additional appropriations and will take time and hard work to achieve. However, the Commission members believe that the modest investment needed would be far out-weighed by the enormous benefits.

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

America needs to know how well prepared its high school seniors are to become productive citizens and to compete in a global economy—how well they can read, write and compute, and what they know about science, history, civics, and other important disciplines. America’s state and national leaders, and indeed the American public, need this information to plan now for education in the next decade and beyond. Only the National Assessment of Educational Progress can provide this information—for the nation and for states—and it is necessary for our nation’s continued well being that it be provided.

## **Recommendations**

**The National Assessment of Educational Progress (NAEP) should provide each state with results on the achievement of its 12<sup>th</sup> graders. All states should participate in reading and mathematics assessments in grade 12 as they do now in grades 4 and 8.**

The Commission members believe that expanding state-NAEP to include grade 12 and requiring all states to participate in reading and mathematics at grade 12 are the most important changes that can be made to 12<sup>th</sup> grade NAEP, and where the value added, service to the public, and opportunity to benefit students, education institutions and the business community will be greatest.

### **NAEP 12<sup>th</sup> Grade Student Achievement Results Are Important**

The 12<sup>th</sup> grade<sup>1</sup> NAEP student achievement results are important and should continue to be provided to the public. They are important because they represent a measure of achievement at the endpoint of compulsory education and the transition to responsible occupations and civic responsibilities. Through their high school experience, young adolescents develop into young adults, destined for adult pursuits—college, postsecondary training for employment, the military and, ultimately, the management of our nation's affairs. What do 12<sup>th</sup> graders know? What can they do? Is this year's group of 12<sup>th</sup> graders better or less well prepared than previous groups of 12<sup>th</sup> graders? It is essential that the public have answers to these questions. Only NAEP is positioned to provide such answers—for the nation and, potentially, for individual states.

The Commission members considered other options for defining “who is tested” for NAEP assessments at the high school level, including: 10<sup>th</sup> graders, 11<sup>th</sup> graders, 15-year-olds, and 17-year-olds, to name a few. These alternatives lack the relevance and usefulness of grade 12 because it is the endpoint of the K-12 education system and a key transition point to adulthood.

NAEP is the only source of nationally representative data on student achievement at 12<sup>th</sup> grade. States typically do not test 12<sup>th</sup> graders and even if they did, state tests, with their varying content and administration procedures, could not be “added up” to get a national result. College admission tests, such as the ACT and SAT, are taken by a self-selected subgroup of college bound high school juniors and seniors and thus do not yield nationally representative results for 12<sup>th</sup> grade students. There are no available means for measuring the results of K-12 education in the United States other than by using NAEP.

### **NAEP 12<sup>th</sup> Grade State Results Are Needed**

National 12<sup>th</sup> grade student achievement results are important because 12<sup>th</sup> grade is the endpoint of compulsory education and the transition point to college, postsecondary training for work, and the military, but state 12<sup>th</sup> grade NAEP results may be even more important.

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<sup>1</sup> The term “12<sup>th</sup> grader” as used in NAEP means a student who has completed and is currently taking sufficient course work to be eligible to graduate from high school at the end of the current school year. Whether a student meets this criterion is determined by the school according to state and local policies; there is no NAEP definition of what combination of courses is adequate for designation as a “12<sup>th</sup> grader.” The Commission members believe that leaving the determination to local school authorities, interpreting local policy, is the correct approach.

Education governance and policymaking are primarily the province of state and local authorities. It is the states' responsibility to provide elementary/secondary education, higher education, and postsecondary training. Thus, the views of state officials about 12<sup>th</sup> grade state NAEP must be given great weight. The Commission members heard from a sample of chief state school officers, state board of education members, representatives of governors, and other state education and business leaders who expressed their reasons for supporting 12<sup>th</sup> grade state NAEP.

State education leaders said that they want a periodic, external measure of 12<sup>th</sup> grade student achievement. They want to compare 12<sup>th</sup> grade achievement results and performance standards of their state—including high school graduation standards—with those of other states and the nation and use the results to help make informed decisions about state-based high school improvement and reform initiatives. Furthermore, state education leaders support NAEP in this role because they recognize NAEP's unique capability to serve as a trustworthy, stable, independent means of monitoring 12<sup>th</sup> grade progress over time.

Only NAEP provides both a consistent measure of student achievement across states and a national reference point for comparison. The dozens of different state-developed tests and standards are designed to measure within-state results, but are unsuitable for cross-state and national comparisons. NAEP gives states—and the public—important information about their standards and assessments in comparison to those of other states and to the nation overall. State tests are developed separately, have differing content, are administered according to varying procedures, apply different standards, and report at different times. State tests, therefore, cannot be compared to each other. However, because NAEP uses common test questions, testing procedures, and reporting measures across states and for the nation, each state that wishes to do so can use NAEP to compare its results with those of other states and to the nation overall.

This *e pluribus unum* aspect of NAEP is its great strength. This strength is especially well realized at grades 4 and 8 in reading and mathematics, where participation of all 50 states is required under the No Child Left Behind Act. This strength is not realized at all at grade 12, because NAEP does not provide state results at grade 12. In fact, no state has a measure that represents the achievement of all its 12<sup>th</sup> graders. While many states have test requirements that must be passed to graduate from high school, they are usually taken by the end of 10<sup>th</sup> or 11<sup>th</sup> grade, with multiple chances for passing by 12<sup>th</sup> grade. They are not a measure of 12<sup>th</sup> grade achievement. Only NAEP is positioned to provide comparable state results at the 12<sup>th</sup> grade. If made available, state-NAEP would permit states to see how well their 12<sup>th</sup> graders meet NAEP's "Basic" and "Proficient" performance standards and how their 12<sup>th</sup> graders compare with peers in neighboring states in subjects such as reading, mathematics, science, and writing.

#### **Participation in NAEP 12<sup>th</sup> Grade State Assessments in Reading and Mathematics Should be Mandatory and in Science and Writing Should be Voluntary**

The Commission members believe that 12<sup>th</sup> grade state NAEP achievement results would provide a needed public service that, based on testimony and comments received, state policymakers will find attractive and desirable. State-level participation at grade 12 should be mandatory for schools in reading and mathematics and voluntary in science and writing, as it is at grades 4 and 8. And, as it is at grades 4 and 8, the cost of participation in state NAEP at grade 12 should be borne by the federal government.



Although voluntary participation in state NAEP at grade 12 in any subject is already authorized, making participation in state NAEP mandatory at grade 12 in reading and mathematics will require legislative authorization.

The state-NAEP program is conducted at present only at grades 4 and 8. Assessments in reading and mathematics at these grades occur every two years, with all states required to participate under the provisions of the No Child Left Behind Act and the costs of NAEP testing and reporting borne by the federal government. As with the 4<sup>th</sup> and 8<sup>th</sup> grade, state-level NAEP at the 12<sup>th</sup> grade would provide a common measure for states that want to compare results across their disparate state assessment systems. The logic of the No Child Left Behind Act suggests that the quality of achievement at the end of the K-12 education system, not just progress along the way, should be the ultimate focal point for measurement. But more than legislative logic, participation of schools in NAEP 12<sup>th</sup> grade state-level assessments in reading and mathematics should be mandatory because of the value and importance of having 12<sup>th</sup> grade student achievement results.

Having good information about what 12<sup>th</sup> graders know and can do is important for what it reveals about the results of K-12 schooling and the readiness of emerging generations to assume capably the reins of adult responsibilities. Such information can be used by state policymakers to help make informed decisions about matters as diverse as: K-12 education standards; the respective need for “developmental” and college-credit instructional classes in higher education; the likely number of individuals qualified for high-skill technical training for employment; the degree to which core knowledge about democratic institutions and principles has been absorbed; and the quality of the pool of potential military recruits.

Mandatory participation in 12<sup>th</sup> grade state NAEP will have a beneficial side effect: improving the participation rate of high schools in NAEP. The low participation rate at the 12<sup>th</sup> grade is a problem that must be addressed (see discussion below in Recommendation 3). The requirement to participate in state NAEP in reading and mathematics at grades 4 and 8 was first implemented in 2003 and had positive effects on participation. With mandatory participation of schools, the overall participation rate of students increased from 80% to 93% at grade 4 and from 78% to 94% at grade 8 between the 2002 and 2003 assessments. It is very likely that mandatory participation of schools in reading and mathematics assessments at grade 12, together with a system of incentives (also discussed in Recommendation 3, below), would result in a satisfactory 12<sup>th</sup> grade NAEP participation rate.

**Subjects other than reading, mathematics, science, and writing should be assessed at the national level only, if resources permit.**

Achievement in reading, mathematics, science, and writing are important overall indicators of academic readiness for pursuits beyond high school. Within the available resources for 12<sup>th</sup> grade NAEP, these subjects should be assessed first. However, these subjects alone do not encompass the knowledge and skills necessary for contemporary life nor do they reflect the range of the high school curriculum. Subjects such as history, geography, civics, foreign language, the arts, and economics also are included in the NAEP schedule of assessments; the Commission suggests this ordering of subjects for consideration as a priority ranking. The Commission members recommend that NAEP should continue to conduct assessments at grade 12, at the national level only, in subjects other than reading, mathematics, science, and writing, according to priorities and a schedule determined by the National Assessment Governing Board.

**2. NAEP should report 12<sup>th</sup> grade students' readiness for college-credit coursework, training for employment, and entrance into the military.**

The Commission members believe that the second most important new direction for 12<sup>th</sup> grade NAEP is to report on readiness for postsecondary learning. Since 1969, NAEP has reported what students know and can do in a range of subjects commonly taught in elementary and secondary schools. NAEP should continue to meet this purpose in reporting 12<sup>th</sup> grade results. However, 12<sup>th</sup> grade is the major point of transition to higher education, training for employment, and entrance into the military. There currently is no dependable source of information about the readiness of 12<sup>th</sup> graders for these destinations, but that information is critically important and NAEP is uniquely positioned to provide it.

Thirty-five years ago and more, a high school diploma was the primary target of education. At the time, it was considered a sufficient prerequisite for getting a job that could sustain an individual and a family and adequate preparation for meeting civic obligations. Today, this is hardly true at all. The earnings gap between those with only a high school diploma and those with postsecondary education and training has widened substantially and the technological/scientific, legal, and moral complexity of today's public policy issues require more to be an "informed citizen" in a democracy.

As our economy moves increasingly from production to service, from manufactured goods to information, from line workers acting in isolation following specific instructions to workers acting collaboratively making independent decisions, and as using technology becomes a part of more job descriptions, a high school education will no longer suffice.

Similarly, expectations are changing for the majority of students about the endpoint of formal education. Today, approximately 88 percent of 8<sup>th</sup> grade students say that they want to attend higher education and about 70 percent of high school graduates do enroll in postsecondary education and training within two years after graduating.<sup>2</sup> However, possession of a high school diploma in itself often does not equate with the competencies needed to be ready for college credit course work or for training for high performance jobs. Many students are finding themselves accepted into college, but—often to the surprise of their parents and themselves—enrolled in "remedial" or "developmental" classes in reading, writing, and mathematics. This adds costs to a college education, increases the time needed to earn a degree, and has the greatest negative impact on low-income students—the very students most at-risk of not finishing. NAEP would provide an important and needed service by reporting on the readiness of 12<sup>th</sup> graders for postsecondary learning—that is, for higher education, training for employment, and entrance into the military—and by illustrating in its reports the competencies that reflect such readiness.

Reporting readiness for pursuits beyond high school is an important new direction for NAEP and a complex undertaking that will require considerable research to implement and validate. For example, the definition of readiness for college varies significantly among institutions across the country. Likewise, the definition of readiness for training for employment will vary, given the vast array of jobs that exist and the respective skills, abilities, and knowledge required to perform them. Carrying out a process to arrive at definitions of "readiness" will be lengthy, and simple, "one size fits all" definitions may not be possible to achieve.

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<sup>2</sup> Kirst, Michael; "College Preparation and Grade 12 NAEP"; paper prepared for the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting; August 2003.

Reporting on “readiness” involves the introduction into NAEP of predictive statements about student performance. Using predictive statements would move NAEP reporting from the current approach of looking “backwards,” describing what 12<sup>th</sup> grade students know and can do as measured by NAEP, to “forecasting” what particular levels of NAEP achievement imply about the adequacy of preparation for various postsecondary pursuits (i.e., college, training for employment, and entrance into the military).

To include predictive statements about post high school readiness in NAEP reports, appropriate validation research would have to be conducted. This would involve studies of college students, individuals in job training of various kinds, military recruits, and cohorts of students who took NAEP, using a longitudinal research design. Clearly, such studies would be costly, take significant time to execute, and may require congressional authorization.

In addition, it is likely that NAEP test frameworks, specifications, test questions, and achievement levels would need to be revised.

NAEP assessment frameworks describe the content to be tested in each subject area assessment and the types of questions to be asked, whether multiple choice, essay, or short answer. The specifications are more detailed instructions used by the test developers in constructing individual test questions and the assessment as a whole. The result is a set of test questions used on the assessment.

The NAEP achievement levels are standards used for reporting NAEP results that describe performance at the “Basic,” “Proficient,” and “Advanced” levels as determined by the National Assessment Governing Board. Each achievement level consists of a range on the NAEP scale, a description of what students in that range know and can do, and illustrative test questions.

The current NAEP 12<sup>th</sup> grade assessments are focused on content generally taught by 12<sup>th</sup> grade and are not specifically designed to support inferences about the readiness of 12<sup>th</sup> graders for higher education, for training for employment, and for entrance into the military. While a preliminary expert review of NAEP 12<sup>th</sup> grade assessments in reading, writing, and mathematics indicated that performance in reading at the “Proficient” level may indicate readiness for college credit course work, this was not found to be true for writing and mathematics and would require further research to validate.<sup>3</sup> The expert review noted that some skills deemed important in determining readiness for higher education are not included in NAEP (e.g., editing skills in writing). Expert reviews of NAEP’s current capacity to report on readiness for work drew similar conclusions.<sup>4</sup> The NAEP frameworks, specifications, test questions, and achievement levels should be reviewed with the objective of supporting such inferences and revised accordingly.

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<sup>3</sup> The Education Trust; “What Can Grade 12 NAEP Tell Us about Readiness for College-level Work?”; study conducted for the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting; September 2003.

<sup>4</sup> Carnevale, Anthony P. and Desrochers, Donna M.; “Considerations in Using 12<sup>th</sup> Grade NAEP as a Prospective Indicator of Readiness for College and Employment”; paper prepared for the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting; October 2003.

ACT, Inc; “Analysis of Commonalities and Gaps: Comparing the National Assessment of Educational Progress to ACT WorkKeys Assessments”; study conducted for the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting; September 2003.

The Commission members believe that reporting on “readiness” will make NAEP more useful to the public and policymakers at the K-12 and postsecondary levels. However, the accomplishment of this new purpose for NAEP faces many foreseen and unforeseen hurdles. The Commission members believe that the move towards reporting on “readiness” should be viewed as a process of change in NAEP, to evolve over time, implement with care, and validate with diligence.

**3. NAEP’s leaders—the National Assessment Governing Board, the U.S. Department of Education, and the National Center for Educational Statistics—should develop and implement bold and dramatically new incentives to increase the participation of high schools and 12<sup>th</sup> grade students in NAEP and the motivation of 12<sup>th</sup> grade students to do their best on NAEP.**

The National Assessment is widely respected as a trustworthy indicator of student achievement at grades 4, 8, and 12, providing the American public data of exceptional quality. However, this respect is at serious risk for the NAEP 12<sup>th</sup> grade information. The risk arises from the low combined participation rate of schools and students at the 12<sup>th</sup> grade in the NAEP sample. The low combined participation rate is a significant threat to the validity of NAEP 12<sup>th</sup> grade student achievement results. The lower the NAEP participation rate is, the less precise the estimates of student achievement produced by NAEP. With about one-third to one-half the students selected for the 12<sup>th</sup> grade sample not participating, the Commission members view the combined school and student rates at the 12<sup>th</sup> grade as too low.

High schools selected for the NAEP sample consistently participate at lower rates than elementary and middle schools. For example, the school participation rates in 2000 were 89%, 85%, and 82% for 4<sup>th</sup>, 8<sup>th</sup> and 12<sup>th</sup> grades, respectively. Likewise, many fewer 12<sup>th</sup> graders drawn for the sample within the schools that do participate actually take NAEP, in comparison to 4<sup>th</sup> or 8<sup>th</sup> graders. In 2000, student participation rates were 96%, 92%, and 77% for 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grade, respectively.

While the separate school and student participation rates appear respectable, the combined school/student participation rates for 12<sup>th</sup> grade are not. Over the period 1988—2000, the combined school and student participation rates at the 12<sup>th</sup> grade have hovered around 65%, meaning that about one-third of the student sample did not participate. However, in 2002, the 12<sup>th</sup> grade rate dropped precipitously to 55%, **meaning that almost one-half of the students drawn for the original sample did not participate** (Table 1). The Commission members believe that action must be taken to improve the school and student participation rates at the 12<sup>th</sup> grade.

Table 1  
Combined School and Student Participation Rates in NAEP by Grade and Year  
1988—2003

|          | 1988 | 1990 | 1992 | 1994 | 1996 | 1998 | 2000 | 2002 | 2003 |
|----------|------|------|------|------|------|------|------|------|------|
| Grade 4  | 82%  | 82%  | 81%  | 80%  | 82%  | 84%  | 85%  | 80%  | 93%  |
| Grade 8  | 76%  | 77%  | 76%  | 78%  | 76%  | 81%  | 78%  | 76%  | 94%  |
| Grade 12 | 65%  | 66%  | 66%  | 64%  | 64%  | 65%  | 64%  | 55%  | *    |

\* Only grades 4 and 8 were tested in 2003. All states were required to participate in grades 4 and 8 reading and mathematics under the No Child Left Behind Act.

The Commission members acknowledge that, by definition, “12<sup>th</sup> grader” includes only in-school youth, and not the significant numbers who have dropped out of high school by 12<sup>th</sup> grade. The dropouts, together with NAEP’s low participation rates, result in only between 45% and 54% of the “potential” sample actually being represented in the NAEP 12<sup>th</sup> grade sample. Reducing dropouts is the responsibility of state and local officials, not NAEP. Nonetheless, it is essential that NAEP’s leaders take significant steps to improve school and student participation rates for grade 12 NAEP.

Steps to improve participation may include intense public information campaigns, special recognition certificates for schools and students that participate in 12<sup>th</sup> grade NAEP, redeemable certificates for students and schools that participate, college scholarships, acknowledgement of NAEP participation on student transcripts, and other tangible incentives for participation. The NAEP “participation strategy” should be informed by research and focus group studies on the effectiveness of various incentives, conducted with 12<sup>th</sup> grade students who have participated in NAEP and with high school principals, beginning with the 2004 NAEP assessments. (An illustration of a participation strategy is provided at Appendix D.)

The common wisdom is that 12<sup>th</sup> graders, being “test wise,” suffering from “senioritis,” and having received college acceptances by the spring of their senior year, do not take “no-stakes NAEP” seriously when asked to participate in February or March of their senior year, the time scheduled for NAEP testing. This common wisdom suggests that NAEP may be underestimating 12<sup>th</sup> grade achievement due to low student motivation. It also has been noted that 12<sup>th</sup> graders leave more blank answers for essay type questions than for multiple choice type questions, another potential source of underestimation of achievement that may be related to student motivation.

Although there is anecdotal evidence that 12<sup>th</sup> graders may not be performing their best on NAEP, there is no conclusive scientific evidence that this is true. And if it is true, there are no data to provide clues about the factors that may be depressing performance or how those factors might be overcome. However, a recent study by the National Research Council<sup>5</sup> finds that student “disengagement” with respect to academics increases as students increase in grade, is pervasive in high schools, and is affected by many school-controlled factors. Although the Commission members do not believe that NAEP can or should take on the overall task of addressing student “disengagement” in high schools generally, it is a factor that NAEP’s leaders must take into account in addressing school and student participation.

Research should be conducted to determine the motivation of 12<sup>th</sup> graders taking NAEP and on ways to enhance participation in NAEP of both students and schools. Examples of possible topics include: developing observable indicators of student engagement in taking NAEP and measuring student engagement against those indicators; identifying impediments to school participation (e.g., sampling procedures and time of year of testing) and ways to reduce those impediments; evaluating the effectiveness of different incentives for participation; and determining whether low completion rates on questions where students must respond by writing sentences or a paragraph signal low student motivation.

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<sup>5</sup> “Engaging Schools: Fostering High School Students’ Engagement and Motivation to Learn”; National Research Council, 2003.

Sufficient resources, imagination, and hard work will be needed to achieve significant improvements in 12<sup>th</sup> grade school and student participation in NAEP. Half-hearted or lackluster efforts will not be adequate, nor will efforts that fail to engage all who are affected—students, teachers, principals, administrators, and many others—in a coordinated approach. Mandating participation in 12<sup>th</sup> grade state NAEP, as suggested in Recommendation 1, above, will do much to improve school participation and, over time, may help somewhat with student participation and motivation, but more will be needed.

Although high school student “disengagement” and “senioritis” may be real, these are maladies that others are properly positioned to address and should not be used as an excuse for non-action where NAEP is concerned. Appeals can be designed that will be attractive to students and principals and that have power to increase school and student participation. Without effective intervention, 12<sup>th</sup> grade participation rates are likely to get worse. Ever-lower participation rates will compromise NAEP’s quality and credibility. Therefore, NAEP’s leaders must focus seriously on increasing school and student participation in 12<sup>th</sup> grade NAEP.

#### **4. NAEP 12<sup>th</sup> grade student achievement results should be given prominence in NAEP reports.**

The Commission members believe that NAEP 12<sup>th</sup> grade student achievement results are especially important and should be presented in ways that capture public attention. Whether through separate chapters in NAEP reports, separate reports limited to 12<sup>th</sup> grade, and other effective means, NAEP 12<sup>th</sup> grade data deserve to be made more prominent. Currently, NAEP 12<sup>th</sup> grade results are reported along with 4<sup>th</sup> and 8<sup>th</sup> grade results. Tables, charts, and graphs in NAEP reports usually display results for grades 4, 8, and 12 together. Report text treats grades 4, 8, and 12 alike. This form of reporting has proven useful and is not recommended for elimination. However, the Commission members believe that the importance of 12<sup>th</sup> grade student achievement demands new reporting policies and procedures that will highlight 12<sup>th</sup> grade results.

The achievement of 4<sup>th</sup> graders and 8<sup>th</sup> graders is important, as it represents progress towards the endpoint of compulsory education for most students—12<sup>th</sup> grade. However, it is the 12<sup>th</sup> grade that is the transition point to higher education, training, employment, and the military. As such, the achievement of 12<sup>th</sup> graders is an indicator of the nation’s potential “human capital” captured at a decisive moment. How many 12<sup>th</sup> graders are ready for a challenging higher education, training for high performance/high pay jobs, demanding assignments in the military, or only low-skill employment? Skill in reading, mathematics, science, and writing are among the primary proxies used for assessing general readiness for entrance or acceptance by institutions of higher education, training organizations, employers, and the military. Therefore, the Commission members believe that NAEP would provide an important service to policymakers and the public by providing reports that highlight the achievement of 12<sup>th</sup> graders, especially in subjects such as reading, mathematics, science, and writing.

**5. NAEP 12<sup>th</sup> grade transcript studies should be continued, the types of information collected should be expanded, and the dissemination of results should be improved.**

Since 1987, NAEP has periodically collected data from high school transcripts of students participating in the 12<sup>th</sup> grade assessments. While these transcript studies hold the potential for providing powerful insights into the rigor of the high school experience, the promise of these data collections has never been realized. Policy oversight and guidance of the transcript studies should be heightened and strategies for dissemination should be improved so that the most important, policy relevant data are collected and analyzed and the results receive appropriate public attention.

The transcript data include courses taken and grades earned. From these data, changes in course-taking patterns over time can be monitored. For example, the NAEP transcript data indicate that between 1982 and 1998, the mean number of course credits taken increased, from 21.6 to 25.1, with most of the increase being in academic courses. Over this period, course taking increased in mathematics (.9 credits), English (.2 credits), science (.9 credits), social studies (.5 credits), and foreign language (.9 credits). These are important findings, suggesting that increasing numbers of high school students are taking more courses and, possibly, more rigorous coursework.

There is great potential in the NAEP transcript data. Many useful analyses could be conducted, including: the relationships between courses taken and student achievement—both in terms of grade point average (GPA) and performance on NAEP; the content and/or academic rigor of the coursework being taken; the relationships between high school exit exams, the number of times taken, and achievement; information on programs of joint enrollment in high school and college courses; the quality or rigor of coursework taken during the senior year; and disaggregation of such results by gender, race/ethnicity, and eligibility for free/reduced lunch. Options for state-level transcript studies should be considered, from merely sharing the transcript study methodology with interested states to federal-state jointly funded special studies.

NAEP transcript studies also could help answer questions about 12<sup>th</sup> grade student motivation on NAEP by examining the likelihood that certain subpopulations of students drawn for the NAEP sample are more/less likely to be “no-shows” for testing, fail to complete the test booklets, or provide “off-task” responses to constructed response questions.

The Commission members believe that the NAEP transcript studies should be continued and that NAEP’s leaders should develop a strategic plan for data collection, analysis, and timely public reporting.

## **Conclusion**

The Commission members appreciate the opportunity to have reviewed 12<sup>th</sup> grade NAEP and have come to view it as a precious and unique resource in American education. Because of the importance of knowing the achievement of this nation’s 12<sup>th</sup> graders, the Commission members believe that there is no choice but to change and strengthen 12<sup>th</sup> grade NAEP. Continuing to provide the public 12<sup>th</sup> grade results is essential, expanding state NAEP to 12<sup>th</sup> grade will serve a crucial need, and providing information about the readiness of 12<sup>th</sup> graders for postsecondary pursuits will vastly increase NAEP’s usefulness. However, NAEP’s leaders must, with thorough resolve and adequate resources, also address the low 12<sup>th</sup> grade participation rates and student motivation to do their best on NAEP. Only then can NAEP’s ability to “tell the truth” about 12<sup>th</sup> grade student achievement be fully achieved.



## National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting

|                                                                                                                                                  |                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
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| Mr. Gene Bottoms<br>Senior Vice President<br>Southern Regional Education Board<br>Atlanta, Georgia                                               | Mr. Louis Caldera<br>President<br>The University of New Mexico<br>Albuquerque, New Mexico                                               |
| Dr. Floyd Coppedge<br>Professor of Education<br>Oklahoma Christian University<br>Oklahoma City, Oklahoma                                         | Dr. James R. Davis<br>Superintendent<br>Hattiesburg Public Schools<br>Hattiesburg, Mississippi                                          |
| The Honorable David P. Driscoll<br>Commissioner of Education<br>Department of Education<br>State of Massachusetts<br>Malden, Massachusetts       | Dr. Curtis Gilroy<br>Director of Accession Policy<br>Office of the Secretary of Defense<br>U.S. Department of Defense<br>Washington, DC |
| Dr. David W. Gordon<br>Superintendent<br>Elk Grove Unified School District<br>Elk Grove, California                                              | Dr. Christine Johnson<br>President<br>Community College of Denver<br>Denver, Colorado                                                   |
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## Overview of The National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is the only nationally representative and continuing assessment of what American students know and can do in various academic subjects in grades 4, 8, and 12. Authorized and funded by Congress, it is commonly known as the Nation's Report Card. Its surveys have been conducted on a national sample basis since 1969 in reading, mathematics, science, writing, history, geography, and other elementary and secondary school subjects. NAEP state-by-state assessments—also on a representative-sample basis—began in 1990. In 2002 and 2003, NAEP conducted the Trial Urban District assessments (TUDA) to study the feasibility of district-level reporting as a component of the NAEP program.

NAEP's national samples include both public and private schools. The state and TUDA samples are of public schools only. Under P.L. 107-110, the No Child Left Behind Act of 2001, all states are required to participate in NAEP reading and math assessments in the 4th and 8th grades every two years, starting in 2003. Participation in all other NAEP subjects and grades is voluntary.

The National Assessment Governing Board sets policy and provides general oversight for NAEP. The National Center for Education Statistics (NCES) is responsible for administering the project.

Since 1969, NAEP has produced more than 200 reports in 11 instructional areas. By making objective information on student performance available to policymakers at the national, state, and local levels, NAEP is an important part of our nation's evaluation of the condition and progress of education.

**How Is NAEP Carried Out?** Through contracts administered by the Governing Board, test frameworks and specifications are developed that are the basis for test construction and achievement levels are proposed that are the basis for reporting results. Through contracts administered by NCES, test instruments are designed based on the test frameworks and specifications approved by the Governing Board; samples of students are selected; data are collected, scored, and analyzed; and reports are written.

**Who is sampled?** NAEP assesses nationally representative samples of public and private school students in grades 4, 8, and 12 and state representative samples of public school students in grades 4 and 8. Scientific sampling procedures are used to ensure that data are reliable and valid. For national samples, there are about 8,000 to 10,000 students per subject per grade. For each state sample, there are 2,500 to 3,000 students per subject per grade. Schools are randomly selected for NAEP based on demographic variables representative of the nation's schools. Students are selected randomly. Their confidentiality is protected by law and the names of the students who have participated in NAEP do not leave the school.

**How is NAEP administered?** Trained NAEP staff members administer the National Assessment. In NAEP state assessments, the participating schools work with a state NAEP coordinator designated by the respective state department of education to assist in collecting information on a statewide level.

To minimize the burden on students and schools, no student takes the entire assessment. Instead, the 200 or more questions developed for each assessment are systematically divided into a set of test booklets, with about 40 to 50 questions in each booklet. Each student responds to the questions in a single test booklet, which permits student testing time to be limited to 1-1/2 to 2 hours. Questionnaires are also given to students, teachers, and principals in order to obtain current information about school policies and instructional practices relevant to learning and student achievement. Only group statistics are reported and no individual student or teacher data are ever released.

**When is NAEP conducted?** The NAEP schedule provides for the conduct of assessments each year. Most assessments are conducted during the months of January-March.

**What subjects are assessed?** The academic subject areas to be assessed are determined by the National Assessment Governing Board and set forth to the public in a 10-year schedule. Reading and mathematics are assessed once every two years, science and writing once every four years, and other subjects (e.g., U.S. history, geography, civics, the arts, foreign language, world history, and economics) less frequently.

## **Commissioned Papers and Research Studies**

1. ACT, Inc; "Analysis of Commonalities and Gaps: Comparing the National Assessment of Educational Progress to ACT WorkKeys Assessments."
2. Barton, Paul E.; "Grading Twelfth Graders: More Useful and More Used NAEP Reporting?"
3. Carnevale, Anthony P. and Desrochers, Donna M.; "Considerations in Using 12<sup>th</sup> Grade NAEP as a Prospective Indicator of Readiness for College and Employment."
4. DeVito, Pasquale; "Motivation and Incentives for High Schools and High School Students to Participate in the National Assessment of Educational Progress at Grade 12. "
5. The Education Trust; "What Can Grade 12 NAEP Tell Us about Readiness for College-level Work?"
6. Hoachlander, Gary; "High School Curriculum and Student Outcomes: Building on the NAEP High School Transcript Studies."
7. Kirst, Michael; "College Preparation and Grade 12 NAEP."
8. Mullis, Ina; "Considerations in Framing a Purpose Statement for Who is Tested by the National Assessment of Educational Progress at Grade 12."

## **Public Comment**

1. Council of Chief State School Officers; Institute on the High School, Focus Group on 12<sup>th</sup> Grade NAEP; Driscoll, David P., Smith, Charles E., and Ward, Michael E.; Lake Tahoe, Nevada; July 29, 2003.
2. National Association of State Boards of Education; Annual Conference, Baltimore, Maryland; October 16-18, 2003; Presentation and Discussion on Preliminary Proposals for Changes to 12<sup>th</sup> Grade NAEP; Driscoll, David P., and Musick, Mark D.
3. National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting; Presentation and Discussion with Tennessee Education Leaders; Nashville, Tennessee; January 14, 2004.

## **Presentations Made to the Commission**

### **Meeting of March 27, 2003**

1. "What is NAEP?"; Dr. Peggy Carr, Associate Commissioner, National Center for Education Statistics.
2. "New York State Regents Exams"; Dr. Gerald E. DeMauro, New York State Education Department.
3. "High Schools that Work"; Dr. Gene Bottoms, Southern Regional Education Board.
4. "Oregon PASS"; Dr. David McDonald, Oregon University System.
5. "Indiana American Diploma Project"; Commissioner Stanley G. Jones, Indiana State Higher Education Commission.
6. "Devolution of the High School Curriculum: 1893—1995"; Dr. Jeffrey Mirel, University of Michigan.

Meeting of March 27, 2003, continued:

7. "Higher Education Perspective on NAEP"; Dr. David Spence, California State University.
8. "Military Perspective on NAEP"; Dr. Curtis Gilroy and Dr. Jane Arabian, Department of Defense.
9. "Business Perspective on NAEP"; Dr. Thomas Saterfiel, ACT, Inc.

Meeting of June 6, 2003:

1. "What are the NAEP Frameworks and Achievement Levels in Reading, Writing, and Mathematics?"; Dr. Mary Crovo and Dr. Sharif Shakrani, National Assessment Governing Board.
2. "What are the NAEP Transcript Studies?"; Dr. Peggy Carr, Associate Commissioner, National Center for Education Statistics.
3. "How Good is 'Good Enough' in Reading, Writing, and Mathematics on College Placement Tests?"; Ms. Kathy Wanstreet, Southern Illinois University, Edwardsville; Ms. Carolyn Kostelecky, ACT, Inc.

Meeting of September 9, 2003:

1. "Readiness of Colorado Freshmen for Higher Education"; Timothy E. Foster, Colorado Commission on Higher Education.
2. "Motivation of Students and Incentives for Schools to Participate in 12<sup>th</sup> Grade NAEP"; Dr. Pasquale DeVito, Assessment and Evaluation Concepts, Inc.
3. "Strengths and Limitations of NAEP as an Indicator of Readiness for Higher Education"; Dr. Michael Kirst, Stanford University.
4. "Using NAEP Transcript Data of 12<sup>th</sup> Graders"; Gary Hoachlander, MPR Associates, Inc.
5. "Improving Reporting and Use of 12<sup>th</sup> Grade NAEP Results"; Paul Barton, consultant.

Meeting of November 5, 2003

1. "Toward a Purpose Statement for 12<sup>th</sup> Grade NAEP"; Dr. Ina Mullis, Boston College.
2. "What Can NAEP Say about Readiness of 12<sup>th</sup> Graders for Higher Education?"; Ms. Patte Barth, The Education Trust.
3. "What Can NAEP Say about Readiness of 12<sup>th</sup> Graders for Work?"; Dr. Anthony Carnevale, ETS; Ms. Jennifer Horn Brown, ACT, Inc.
4. "What Do We Know about 12<sup>th</sup> Grade Achievement, What Do We Need to Know, and What Can NAEP Provide?"; Ms. Kati Haycock, The Education Trust.

## **Increasing Participation In 12<sup>th</sup> Grade NAEP: An Example**

Following is one possible scenario, developed by the National Commission on NAEP 12<sup>th</sup> Grade Assessment and Reporting, to illustrate the factors that would comprise a serious approach to increasing the participation of high schools and 12<sup>th</sup> grade students in NAEP and the motivation of 12<sup>th</sup> grade students to do their best on NAEP.

### **A. Funding**

Incentives for participation will have associated direct and indirect costs. It is essential that these costs be acknowledged and fully supported. A specific amount of the annual NAEP appropriation should be budgeted and set aside for incentives to schools and students.

### **B. Congressional support**

Members of the National Assessment Governing Board, the Secretary of Education, the Director of the Institute of Education Sciences, and the Commissioner of Education Statistics, should make a compelling case to Congress that 12<sup>th</sup> grade NAEP—particularly at the state level—is important, that increasing participation is essential, that a comprehensive, effective plan for increasing participation has been developed, and that adequate funding for incentives should be supplied.

### **C. External support**

Members of the National Assessment Governing Board, the Secretary of Education, the Director of the Institute of Education Sciences, and the Commissioner of Education Statistics, should work with the following individuals and organizations to explain the importance of 12<sup>th</sup> grade NAEP and to obtain commitments to assist in increasing participation of high schools and 12<sup>th</sup> grade students in NAEP: the White House, governors, chief state school officers, state legislators, higher education officials, state and national groups representing governors, state legislators, higher education officials, chief state school officers, school superintendents, school board members, high school principals, teachers, and students, print and broadcast media, entertainment and sports figures, advertising and marketing agencies, national and state business groups, and business leaders.

The staff of the National Center for Education Statistics that administers NAEP should seek advice from experts in communications on ways to (1) better “frontload” the process with outreach to state superintendents, district superintendents, principals, and teachers; (2) improve the materials that explain what NAEP is and why participation is important that the NAEP contractors give to schools and students; and (3) improve the “scripts” used with students by test administrators in the testing situation.

## **D. Incentives**

Incentives should be developed that are attractive to students. For example, each year, two \$5,000 college scholarships could be awarded per state—one to a female student and one to a male student—selected at random from the set of all students who participate that year in 12<sup>th</sup> grade NAEP, complete all test questions, answer at least 25% of the multiple choice questions in their booklet correctly and have no “off task” ratings on constructed response items. Students in families with incomes that qualify for Pell grants would receive an additional \$2,500 scholarship. Upon completion of testing, all students who take NAEP would receive a thank you letter from the President of the United States on White House stationery.

In support of this effort, all public 2 and 4 year colleges and universities in each state will offer 20% discounts for all bookstore purchases for one year to every student who took 12<sup>th</sup> grade NAEP and holds the “NAEP discount card.” All 12<sup>th</sup> grade students taking NAEP will receive the “NAEP discount card,” which will be accepted at college bookstores and also at businesses that support NAEP (e.g., national and local bookstores, record stores, clothing stores, retail chains, restaurants, movie theaters, etc.).

An on-going NAEP public information campaign would be conducted. Businesses participating in the NAEP discount program will indicate through prominent in-store displays and advertising that they support NAEP and encourage students to do their best. As a public service, cooperating advertising and marketing agencies, and print and broadcast media will offer discounts to businesses that support NAEP and include that message prominently in their advertising and/or in public service announcements.

Partnerships will be sought with entertainment and sports stars—as well as related foundations—concerned about education. Public service announcements and personal appearances utilizing these figures will be developed and broadcast in areas where NAEP testing will take place, beginning the month prior to testing. In addition, a short video using entertainment and sports stars explaining what NAEP is and why it is important to do their best will be played for the students as a part of the orientation to NAEP prior to testing.

Incentives for schools will be developed. Incentives that are attractive to students also will be attractive to schools, making teachers’ and principals’ “selling” job easier, such as the chance at a valuable college scholarship. Letters signed by the President of the United States will be sent to the principal of each school selected for the sample, explaining the importance of NAEP at the 12<sup>th</sup> grade and asking for the principal’s full cooperation, including active, affirmative encouragement of students selected for the sample. Participating schools will receive Department of Education recognition as a NAEP school with a banner that can be prominently displayed at the school. Local print and broadcast media will run stories about the schools that are selected for participation. Governors, chief state school officers, and others (e.g., national and state principal groups) will fulfill the commitments they made to NAEP’s managers (see above) about encouraging participation. For example, they may make direct contacts with the schools in their state to encourage participation and also provide letters of support for the sampling and testing contractor to include in information packets given to the schools.

## **Summary**

The scenario outlined above attempts to provide one example of a serious, systematic strategy to increase school and student participation in grade 12 NAEP. Its key components include:

- Regular allocation of specified resources
- Comprehensive identification of key players
- Multiple, integrated, mutually reinforcing incentives for key players, schools, and students

This example illustrates the resources, imagination, and hard work needed if satisfactory improvements in 12<sup>th</sup> grade school and student participation in NAEP are to be made. NAEP's leaders must focus seriously on increasing participation or face the prospect that the quality and credibility of the 12<sup>th</sup> grade NAEP achievement results will be compromised.