

Adopted: May 18, 2002



## National Assessment Governing Board

### Sampling Issues

#### Introduction

Under the No Child Left Behind Act of 2001, obtaining the most precise estimation possible of student performance on state NAEP assessments is more important than ever. Several policies pertaining to the state-by-state component of NAEP result in lower precision in states and other jurisdictions having certain characteristics than would be the case if those policies were not in effect. Therefore, modification of these policies is desirable.

It has been the policy in conducting the state-by-state component of NAEP to provide certain options to small and sparsely populated jurisdictions. These options were designed to reduce the burden on schools and students. Referred to as the Sparse State Option and the Small State Option, they result in smaller numbers of students being sampled in jurisdictions selecting the options than in the other participating jurisdictions. The reduction in sample sizes results in a reduction in the precision of results reported for those jurisdictions, especially in results for subgroups of students that are important under the Act. Because a contractor's staff now administers the state-by-state NAEP, the burden on state schools and personnel has been substantially reduced. Hence, eliminating these options and increasing precision of results reported for these jurisdictions is appropriate at this time.

It has also been the policy in the state-by-state NAEP to report results for jurisdictions in state NAEP that met a criterion of 70% participation of schools initially selected for the assessment. Results for jurisdictions that did not obtain participation of higher percentages of selected schools, however, were reported with annotations.<sup>1</sup>

#### Policies

- 1. The Board modified current policy to eliminate the sparse state sampling option.**
- 2. The Board modified current policy to eliminate the small state sampling option.**

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<sup>1</sup> See, for example, *The Nation's Report Card Mathematics 2000*, Appendix A.

**3. The Board modified the current policy to require 85% rather than 70% participation by schools as a condition of reporting state results and eliminated the reporting category of reported but annotated.**

## Rationale

1. The sparse state option has been used by very few jurisdictions and resulted in decreased sample sizes in those jurisdictions, with an accompanying decrease in accuracy of reported results. The NAGB and NCES staff recommendation was to discontinue offering this option.

2. The small state option, like the sparse state option, resulted in decreased sample sizes and an accompanying decrease in the accuracy of reported results. The NAGB and NCES staff recommendation was to discontinue offering this option to jurisdictions participating in state NAEP.

3. There are several related elements of the rationale for the change in the percentage criterion for school participation rate. First, NAGB has already adopted the criterion that if the school participation rate after substitution is less than 85%, results will only be published with an annotation indicating that the sample may not be representative. Second, the draft NCES statistical guidelines call for an analysis of nonresponse bias if participation falls below 85% in NCES studies. Third, the 70% participation rate, when multiplied by student level participation rates can easily yield a net participation below 60% of students sampled. If, for example, a jurisdiction's school rate is 70% and their student participation rate is 85%, the overall participation rate is the product of these two numbers, 59.5%. If the No Child Left Behind Act requirement that parents be notified of their children's selection for NAEP depresses student participation rates, it will be more important than ever to have better school participation rates. Fourth, the No Child Left Behind Act mandates participation by sampled districts receiving Title I funds. This should make it easier to meet the 85% threshold. Fifth, a review of participation rates in recent state assessments confirmed that most states already meet the more stringent criterion. In summary, given the increased attention to and importance of NAEP state assessment results under No Child Left Behind, it is imperative that NAEP samples be as precise as possible so NAEP continues to produce technically sound data. Changing the required school participation rate to 85% will help to assure that NAEP faithfully represents the achievement of each jurisdiction and all subgroups reported.