NCLB IMPLEMENTATION REPORT:
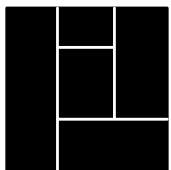## STATE APPROACHES FOR CALCULATING HIGH SCHOOL GRADUATION RATES

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Related Research from the Urban Institute's Education Policy Center:

Christopher B. Swanson 2003. Keeping Count and Losing Count: Calculating Graduation Rates for *All* Students under NCLB Accountability. Washington, D.C.: The Urban Institute.

    Available on-line: http://www.urban.org/url.cfm?ID=410843

Christopher B. Swanson 2003. Caps, Gowns, and Games: High School Graduates and NCLB. Learning Curve: Facts and Perspectives Brief No. 1. Washington, D.C.: The Urban Institute.

    Available on-line: http://www.urban.org/url.cfm?ID=310777

Christopher B. Swanson and Duncan Chaplin 2003. Counting High School Graduates when Graduates Count: Measuring Graduation Rates under the High Stakes of NCLB. Washington, D.C.: The Urban Institute.

    Available on-line: http://www.urban.org/url.cfm?ID=410641

TABLE OF CONTENTS

INTRODUCTION

The No Child Left Behind Act of 2001 (NCLB) holds states and the districts and schools under their jurisdiction accountable for student performance; and it does so according to standards that considerably exceed the requirements of earlier federal legislation. While student achievement must be the primary indicator of performance under NCLB, statewide accountability systems are also required to incorporate one additional academic indicator. At the secondary level, this must be the high school graduation rate (HSGR). The states outlined their plans for implementing the federally-mandated statewide accountability systems in the Consolidated State Application Accountability Workbooks, which were submitted to the U.S. Department of Education for approval. This report presents the results of an analysis of these Workbooks and focuses specifically on provisions related to the definition and measurement of high school graduation rates under NCLB.

The process of obtaining approval for these NCLB accountability plans has proceeded in a series of steps. All states submitted an initial draft of their Workbooks by January 31, 2003, the federally-mandated deadline. The state plans were then evaluated through an external peer review process over the next several months. These peer reviews were conducted on site by three-member teams consisting of independent non-federal experts in the fields of educational policy, reform, and statistics. Recommendations stemming from the peer review reports, in many cases, resulted in further discussions between the federal Department and the states and in revisions to the state plan drafts initially submitted. As of June 10, 2003, all state plans have been approved (at least provisionally) by the U.S. Department of Education.

Follow-up letters sent by the Department to chief state school officers indicate that further action on the part of the states may be required before they are considered to be fully in compliance with the requirements of the law. However, a review of these letters conducted for this report suggests that the Department is requiring few modifications of substance to the approaches for measuring HSGR outlined in the released state plans. Letters to twelve states, for example, contained no reference of any kind to graduation rates. Overall, the letters received by a majority of states (34) indicated that aspects of their plans were not fully compliant with the provisions of NCLB that pertain to graduation rates. In each of these cases, however, the Department was willing to exercise its authority to grant approval of these components as a means of permitting an orderly transition from the requirements of the Improving America's Schools Act (IASA) to those of No Child Left Behind. (IASA is the name by which the version of the Elementary and Secondary Education Act authorized prior to NCLB is commonly referred.) In this way, the Department provided states with considerable flexibility for implementing the law in two major areas. First, states were authorized to use interim HSGR indicators that fall short of certain aspects of NCLB's statutory requirements (provided that they intend to employ a more suitable measure at some point in the future). Second, states were also permitted to use an alternative indicator for the purposes of disaggregating results for individual subgroups (until a suitable HSGR indicator is available). The review of follow letters also indicated that the accountability plans in 12 states will not be eligible to receive final approval from the Department until provisions related to HSGR are formally adopted as state policy.

The review summarized in this report investigated the state accountability Workbooks provisionally approved and publicly reported by the U.S. Department of Education as of June 2003. These documents were obtained from the U.S. Department of Education website. This report focuses on one specific issue in detail—state definitions of high school graduation rates and their strategies for constructing a graduation rate indicator. In most cases the information reported below has been derived from Section 7.1 of the accountability Workbooks. For some states, however, it was also necessary to reference additional documentation cited in (although not included with) the plan in order to resolve certain questions regarding details of the state's approach for measuring HSGR. As noted above, it is possible that further revisions to the state plans may be made as a result of on-going negotiations between the states and the Department of Education as well as state-initiated efforts to refine their accountability system. The Urban Institute plans to continue monitoring NCLB implementation in order to identify important changes in state approaches to accountability over graduation rates.

SUMMARY OF FINDINGS

A review of NCLB accountability plans approved for the 50 states and the District of Columbia suggests that states are planning to take advantage of the substantial regulatory flexibility afforded by the U.S. Department of Education in this area of NCLB implementation. Indeed, states have proposed a wide variety of methods for measuring graduation rates. The most common approach, pursued by 30 states (including the District), adopts a method developed by the National Center for Education Statistics, the U.S. Department of Education's statistical agency (see Figure 1). In the initial stages of implementing their NCLB accountability systems, only 10 states intend to use a true longitudinal graduation rate calculated using data from individual students tracked over time. The accountability Workbooks for the remaining 11 states include a diverse array of strategies for meeting compliance with the law. These approaches range from using a dropout rate rather than a graduation rate per se (2 states), to calculating completion ratios (4 states), to employing other methods including grade-to-grade promotion ratios (5 states in all).
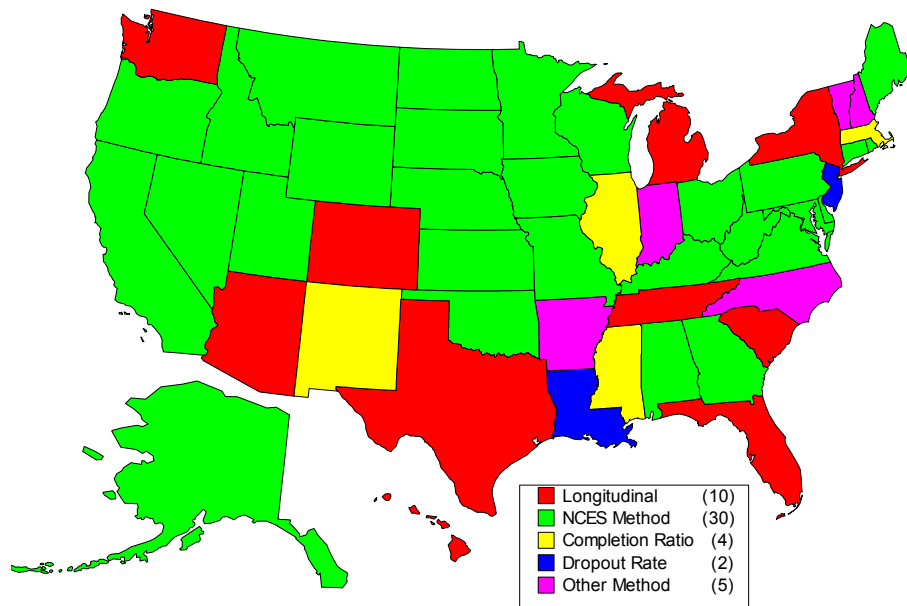
Figure 1: State Approaches for Calculating Graduation Rates for NCLB Accountability

DESCRIPTION OF MATRIX FIELDS

The matrix presented below reports the detailed results from the analysis of state accountability Workbooks. The table contains the following fields of information.

State: Name of state

Plan Approved: Date on which U.S. Department of Education press release announced the state plan had received approval from the Secretary.

Type Indicator: Initial indicator specified in the state plan. In some cases this is an interim measure to be replaced at a later point in time with another (presumably more accurate) indicator.

- <u>Longitudinal</u> – rate based on data from students tracked individually over time

- <u>NCES</u> – rate based on an adaptation of the NCES "completion rate"

- <u>Completion Ratio</u> – rate based on the proportion of the number of graduates in a given year to the number of students enrolled at an earlier time

- <u>Dropout Rate</u> – state proposes to use a dropout rate rather than a graduation rate per se

- <u>Other</u> – another method that does not fit into above categories

Notes: Additional observations and points of clarification related to methods for calculating the high school graduation rate. Entries in quotations are language used in the state plans to describe the graduation rate method. Where applicable, this field notes situations where language in the state Workbooks was not sufficiently clear or detailed to allow for a conclusive categorization of its graduation rate method.

FORMULAS FOR COMMON GRADUATION RATE METHODS

Longitudinal Rate

Percent of students from an entering a 9th grade cohort who graduate with a regular diploma in four years. Adjustments to the original cohort may be made for students who join or leave the school system at grade-level during that four-year period.

$$LGR = \frac{G_y^c}{E_{y-3}^9 + J^c - L^c}$$

where: G_y^c is the count of individual students who entered high school in the fall of year **y-3** and graduated with a regular diploma within four years (i.e., in the spring of year **y**);

   E_{y-3}^9 is the count of students enrolled in the 9th grade in year **y-3** (the entering high school cohort);

   J^c is the count of students who joined the high school cohort as a result of transferring into the school system at expected grade-level (e.g., in 11th grade for the **y-1** school year).

   L^c is the count of students from the entering school cohort who legitimately left the school system by year **y** as a result of: mobility (to another public school system), transfer to a private school, death, etc.

National Center for Education Statistics

Regular diploma recipients as a percent of students leaving high school over a four-year period (estimated as the sum of diploma recipients and dropouts during the past four years in grades 9 through 12 respectively).

$$NCES_y = \frac{G_y}{G_y + D_y^{12} + D_{y-1}^{11} + D_{y-2}^{10} + D_{y-3}^9}$$

where: G_y is the count of students who graduated with a regular high school diploma during the **y** school year, and

   D_y^{12} is the count of students who dropped out of grade 12 during the **y** school year.

Basic Completion Ratio

Number of graduates in a particular year divided by the number of entering students at some earlier point in time. The most basic form of this indicator (shown below) divides graduates by the number of 9th graders four school years earlier. Adjustments to this basic indicator may be made to accommodate more detailed information such as mobility in and out of a school system.

$$BCR = \frac{G_y}{E_{y-3}^9}$$

where: G_y is the count of students who graduated with a regular high school diploma during the **y** school year, and

   E_{y-3}^9 is the count of students enrolled in grade 9 in year **y-3**.

HIGH SCHOOL GRADUATION RATE (HSGR) APPROACHES FROM STATE NCLB ACCOUNTABILITY WORKBOOKS

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Alabama	6/10/2003		✓				• **NCES method (not cited explicitly)** • "estimated cohort graduation rate" • multiple credentials counted as graduates • non-standards based certificates (incl. GED) do not count • summer graduates are included in numerator • denominator includes students with other (non-diploma) exit documentation • AL proposes projected 4-year dropout rate as interim safe harbor measure (cannot currently compute disaggregated NCES HSGR)
Alaska	6/10/2003		✓				• **NCES method (cited explicitly)** • "estimated cohort group rate" • summer graduates in numerator • non-diploma recipients in denominator (incl. GED) • exit exam required starting with 2003–04 (non-passers receive Cert. of Achievement—not counted as a diploma) • AK anticipates changes in diploma requirements over next several years
Arizona	6/10/2003	✓					• **Longitudinal method** • data obtained from locally-generated sources (i.e., no state-wide student tracking system) • specifies receiving diploma within four years of starting high school • accounts for transfers and deceased students
Arkansas	4/30/2003					✓	• **Estimated cohort serial promotion rate** • "completion rate" • calculated as product of the estimated grade promotion rate for each of the four model grade levels for an estimated cohort (e.g., dropout rate for 9th graders in year *y-3*, 10th graders in year *y-2*, etc.) • grade promotion rate is estimated as *1 – Dropout Rate* • AR rate is based entirely on dropout information and does not include information about the type of high school completion credential (if any) received • types of credential(s) counted as "graduates" not specified (although dropouts who later complete GED are still counted as dropouts)

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
California	6/10/2003		✓				• **NCES method (cited explicitly)** • "synthetic graduation rate … aggregated over a four-year period" • CA cannot currently disaggregate graduation rates by subgroups (for safe harbor)
Colorado	1/8/2003	✓					• **Longitudinal method** • "cumulative or longitudinal rate" • CO has locally developed graduation requirements rather than a single statewide standard
Connecticut	6/10/2003		✓				• **NCES method (not cited explicitly)** • "based on schools' reported aggregate graduation data" • starting with class of 2006, rate will be based on data from individual student data system (not clear whether it will be a longitudinal data system)
District of Columbia	6/9/2003		✓				• **NCES method (not cited explicitly)** • conforms to NCES definition for dropouts • additional details about graduation rate method are included in an external Appendix not available with posted plan
Delaware	4/11/2003		✓				• **NCES method (cited explicitly)** • modified to exclude GED recipients
Florida	4/29/2003	✓					• **Longitudinal method** • FL notes that their method is more accurate than NCES • denominator is "four-year adjusted cohort" that accounts for transfer, deceased students, and on-time grade progression • two completion credentials will count as "graduates"—Standard Diploma and State of Florida/High School Equivalency Diploma (which differs from standard GED and has equal status with other state diplomas)
Georgia	5/19/2003		✓				• **NCES method (not cited explicitly)** • Sec 7.1 of the Workbook quotes NCLB statutory requirements and references changes from the existing state method but does not describe the proposed method directly • HSGR method reported in external technical documentation, which indicated NCES method • non-diploma completers are included in denominator

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Hawaii	5/28/2003	✓					**Longitudinal method** "percent of first-time ninth grade students who graduate with a diploma within four years" - description of method in plan does not explicitly mention "tracking" or "longitudinal" data - HI does have some type of student tracking system, although it is not clear whether that includes collection of graduation data - NOTE: description not conclusive regarding the use of longitudinal data
Idaho	6/10/2003		✓				**NCES method (cited explicitly)** "graduates" exclude GEDs and non-aligned diplomas - provisions will be developed to determine standard number of years for graduation for students with individualized educational plans (IEPs) - ID cannot currently disaggregate HSGR by subgroups
Illinois	6/10/2003			✓			**Completion ratio (adjusted)** "cohort method (i.e., the percentage of ninth grade students remaining until graduation)" - number of graduates (with regular diploma only) divided by first-time 9th graders four years earlier - denominator is adjusted for transfers - NOTE: description not conclusive regarding use of longitudinal data
Indiana	1/8/2003					✓	**"NCES survival model"—estimated cohort serial promotion rate** - calculated as product of the estimated grade promotion rate for each of the four grades of high school - grade promotion rate is estimated as *1 – Dropout Rate* - NOTE: not clear from level of detail in description whether rate is synthetic (i.e., draws data from a single point in time versus over a period of four years)
Iowa	6/6/2003		✓				**NCES method (not cited explicitly)** - language in plan is ambiguous regarding treatment of "other completers" (i.e., students who finish high school program but do not earn a diploma) - IA students must drop out before entering a GED program

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Kansas	4/4/2003		✓				• **NCES method (not cited explicitly)** • "look at same group or cohort of students" • rate accounts for dropouts and transfers over a four-year period • language in plan's description is ambiguous, so it is possible that KS may have longitudinal data • HSGR description does not explicitly mention individual student tracking • NOTE: description not conclusive regarding use of longitudinal data
Kentucky	6/10/2003		✓				• **NCES method (cited explicitly)** • "emulates true cohort approach" • method modifies existing approach by excluding certificates for profoundly disabled students from graduate counts
Louisiana	4/17/2003				✓		• **Dropout rate** • LA uses NCES definition of dropout • state has longitudinal tracking system • plan argues that dropout and graduation rates are "measuring the same thing" • LA proposes to develop method for calculating cohort HSGR, which will first be available for the class of 2005–06
Maine	6/10/2003		✓				• **NCES method (not cited explicitly)** • language in Section 7.1 of the plan seems to specify a 5-year window for completion (at least for students enrolled in an extended year program)
Maryland	4/1/2003		✓				• **NCES method (cited explicitly)** • "synthetic graduation rate formula" • graduate counts exclude: special education certificates, GED, and non-standards diplomas
Massachusetts	1/8/2003			✓			• **Completion ratio (grades 10 to 12)** • based on aggregate school data • calculated as number graduates (in year y) who took 10th grade assessment two years earlier ($y - 2$) divided by number of students enrolled at time of 10th grade assessment (adjusting for transfers) • for class of 2005, an alternative rate will be available based on new student data system (presumably longitudinal)

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Michigan	6/9/2003	✓					• **Longitudinal method** • "percentage of the cohort who earn a regular diploma" • language describes student tracking system; "following ninth grade students as a cohort through the years of high school" • Section 7.1 of the plan lists detailed enrollment and exit codes from state data system
Minnesota	6/10/2003		✓				• **NCES rate (cited explicitly)** • "cohort emulation formula"
Mississippi	3/19/2003			✓			• **Completion ratio (grades 9 to 12)** • calculation method employs cross-sectional data and adjusts for number of transfers, retentions in grade, and deaths • HSGR cannot currently be disaggregated by subgroup; one of the approved interim alternatives for disaggregation is a one-year graduation rate • rate based on longitudinal data is planned for 2004–05
Missouri	4/30/2003		✓				• **NCES method (cited explicitly)** • GED counted as dropout
Montana	6/10/2003		✓				• **NCES method (cited explicitly)** • "estimated cohort group rate" • MT does not currently collect disaggregated statewide data for all NCLB subgroups; in the interim schools and districts will provide data on those subgroups
Nebraska	6/10/2003		✓				• **NCES method (cited explicitly)** • NE cannot currently disaggregate by all subgroups; in the interim, districts will submit disaggregated data if safe harbor is applicable
Nevada	6/10/2003		✓				• **NCES method (cited explicitly)** • "adjusted diploma" (IEP students) and certificate of attendance recipients are not counted as graduates

New Hampshire	6/10/2003					✓	• **Compound rate**
							• calculated as product of:
							    (1) *Completion Rate* and
							    (2) *Regular Diploma Rate*
							• *Completion Rate* = 1 – cumulative dropout rate
							• *Diploma Rate* = percent of completers with regular diploma in the standard number of years
							• Section 7.1 of the plan describes HSGR as "modified NCES graduation rate" although this does not seem accurate given description provided
							• NH expects to be able to produce a more accurate method using a new data system by 2005–06; no details are provided on method to be used

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
New Jersey	5/8/2003				✓		**Dropout rate** - NJ will use dropout rate as interim indicator through 2002–03 - starting with 2003–04, **NCES method** will be used - dropout and graduation information are currently collected locally by districts rather than as part of a statewide data system
New Mexico	5/16/2003			✓			**Completion ratio (grade 12)** - one-year completion rate for 12th graders - starting with class of 2005–06, HSGR based on student tracking system will be available
New York	1/8/2003	✓					**Longitudinal rate** - language not explicit regarding a longitudinal student tracking system, although description of the method is generally consistent with longitudinal rate - some exceptions to four-year graduation window may be made for students in state-approved five-year program - NOTE: description not conclusive regarding use of longitudinal data
North Carolina	4/25/2003					✓	**Percent of graduates who complete on time** - calculated as percent of current graduates in a given year who took the state's 8th grade exam five years earlier - method based on elapsed time since 8th grade exam - longitudinal rate (based on LEA-maintained records) anticipated for class of 2005–06
North Dakota	6/10/2003		✓				**NCES method (not cited explicitly)** - starting with the class of 2005, a new rate will be calculated that takes into account "graduates, retentions, and dropouts within cohorts" - this indicator for 2005 may be based on longitudinal data (plan description not conclusive)
Ohio	1/8/2003		✓				**NCES method (cited explicitly)** "estimated cohort group rate"
Oklahoma	5/30/2003		✓				**NCES method (cited explicitly)** - for class of 2003 and 2004, OK will calculate a "synthetic group rate" using data from a single school year according to the NCES method - starting with class of 2005, will use the standard NCES "estimated cohort group rate" with data over a four-year period

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Oregon	5/30/2003		✓				• **NCES method (cited explicitly)** • modified to be a synthetic rate—"one-year version of the modified NCES graduation rate formula" • rationale for using synthetic rate is "to better measure the immediate impacts of educational policies that existed in the reporting year"
Pennsylvania	6/2/2003		✓				• **NCES method (cited explicitly)** • PA will use a synthetic version of the NCES rate until four years of data are available
Rhode Island	5/15/2003		✓				• **NCES method (cited explicitly)** • "cohort estimation formula" • RI has used a synthetic rate in past • new "student roster tracking method" will enable longitudinal rate to be calculated starting with the class of 2007 (used for AYP in 2008)
South Carolina	5/22/2003	✓					• **Longitudinal method** • Section 7.1 of plan is not explicit about existence of a longitudinal tracking system • language used to describe the method is consistent with a tracking system—identifying completion within four years, retentions, and transfers
South Dakota	6/3/2003		✓				• **NCES method (cited explicitly)** • provisions for counting student s with disabilities and IEP as completers are specified
Tennessee	5/29/2003	✓					• **Longitudinal rate** • "cumulative or longitudinal rate" • description is explicit regarding existence of data system capable of tracking individual students • formula for calculating the HSGR is described in terms of NCES completion rate method (although data will be longitudinal)
Texas	6/6/2003	✓					• **Longitudinal rate** • plan explicitly describes longitudinal student tracking system • longitudinal rate described as an adaptation of "holding power index" • final status for members of focal cohort classified into four categories: graduates, GED, still enrolled, and dropout. • TX data system includes 30 different "leaver codes" and 17 different graduation codes • students whose final status cannot be determined are removed from status cohort

State	Plan Approved (date)	Longitudinal	NCES	Completion Ratio	Dropout Rate	Other	Notes
Utah	6/10/2003		✓				• **NCES method (cited explicitly)** • UT modifies NCES to estimate 3-year completion (for grades 10–12) • rationale for three-year rate is to ensure statewide comparability (across high schools with different grade spans) • data for calculations are compiled from separate school-level aggregate files • disaggregated HSGR cannot currently be calculated for all subgroups; attendance rate will be used as proxy where required
Vermont	6/2/2003					✓	• **Method Unclear** • description of method lacks sufficient technical detail to identify method of calculation • it appears that the rate may most likely be a four-year completion rate, probably based on cross-sectional data • VT proposes to phase in 5-year completion rate in 2005 using modified data collection system (possibly producing longitudinal information)
Virginia	6/10/2003		✓				• **NCES method (cited explicitly)** • VA does not currently have a statewide student record system • VA plans to implement individual student record system capable of calculating true longitudinal rate in 3–5 years
Washington	4/30/2003	✓					• **Longitudinal rate** • "use of the cohort graduation rate as the other academic indicator for high schools is a recognized standard" • language in plan does not explicitly mention individual student tracking system or longitudinal data • description of HSGR suggests longitudinal data—ability to identify completion in four years and students who continue to be enrolled but have not graduated
West Virginia	4/7/2003		✓				• **NCES method (cited explicitly)** • plan cites provisions made to determine standard number of years for IEP students
Wisconsin	5/21/2003		✓				• **NCES method (not cited explicitly)** • WI plans to implement new student record system in 2004–05 that will support tracking of students
Wyoming	5/22/2003		✓				• **NCES method (cited explicitly)** • Section 7.1 of plan quotes language from NCES reports to describe the method, which estimates "What percent of students exiting education do so with a regular diploma" • disaggregated rates are not currently available for all subgroups