The Great Graduation-Rate Debate

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Contents

Introduction

In his speech on education reform on March 10, 2009, President Obama said that the dropout rate had tripled since 1970.[1] Immediately afterward, some pointed to other data showing that graduation rates have mostly been *stagnant* since 1970 and still more data demonstrating that rates have actually *improved* since 2000.[2] How did the President arrive at his figure? Just what is the right graduation rate, anyway? And why is there so much noisy debate about this issue?

Alas, these are not easy questions to answer, however much we might think they ought to be straightforward.

The purpose of this paper is to promote clearer understanding of the graduation-rate debate by distilling the policy developments and controversy surrounding the measurement of these rates over the last decade.

Several questions drive the discussion:

- Why are there so many different ways to calculate graduation rates?

- What are the key variables that distinguish the various rates?

- How do these different rates account for the multiple pathways to high school graduation?

- What are the data sources used in the various dropout-rate calculations, and what are their pros and cons?

The paper concludes with a discussion of the move toward a federally mandated common metric for graduation rates. The No Child Left Behind (NCLB) Act of 2001 required states to include such rates as a factor when making "Adequate Yearly Progress" (AYP) determinations for high schools. Yet it allowed great discretion in how graduation rates were measured and how much progress states had to make over time. This in turn led to growing interest in a common graduation-rate measure for all states, a goal that was embraced by the governors several years ago and then codified into federal regulations in 2008.[3] (We've included a glossary—Appendix B—to guide you through the dizzying maze of education-related acronyms.)

In some respects, this means that the original "graduation-rate debate" has been settled, in terms of measures and metrics for state, district, and school graduation rates. But there's a new debate on the horizon—whether and how to use those rates as a part of school accountability systems. Is it possible to do so without creating a new set of unintended consequences? What does it mean to be a "high school graduate" anyway? Read on.

⊖ What's at stake

Graduation rates are scrutinized so heavily because they're critical indicators of the economic and educational health of American society.

They've also been in the news because it appears that we're losing ground. The United States has lost its standing as a leader in high school graduates, now ranking 17th out of the 23 nations for which rates are reported. And that's using the generally rosier Census data (see Appendix Figure A-1).[4] The United States continues to decline on this measure even as it manages to rank first in total expenditures per student for all levels of education.[5]

Other measures appear to show that graduation rates have been stagnant for the last 40 years and remain critically low in our nation's urban areas and in parts of rural America. Graduation gaps between majority and minority groups have not narrowed in the last three decades.[6] Mostly in large cities, schools described as "dropout factories" often see fewer than fifty percent of their students graduate.[7] Twelve percent of the nation's high schools, about 2,000 in number, produce more than half of its dropouts and close to three-quarters of its minority dropouts.[8] Urban areas graduate, on average, fourteen percent fewer of their students than suburban areas.[9]

Such trends matter because there's no getting around the fact that, on average, high school graduates experience better economic outcomes than students who don't graduate, just as those who graduate from college enjoy markedly better economic outcomes than those who only graduate from high school. As a result, high school graduation rates are also an important indicator of the future success of our workforce.

The economic returns of graduation have increased even as the percentage of young people graduating has not. College graduates with a bachelor's or higher degree have median weekly earnings nearly 2.5 times greater than the typical high school dropout, amounting to an annual difference of $33,488.[10] The gap in unemployment rates between those with a four-year college degree and those without a high school diploma widened from 3.3 percentage points in 1970 to 5.1 points in 2007.[11]

There's even evidence that dropping out of high school is a public health issue.[12] The Centers for Disease Control (CDC) recently reported that more formal education is consistently associated with lower death rates. Less education, on the other hand, predicts earlier death.

Measuring High School Graduation Rates: The Basics

We understand why the debate around graduation rates is so contentious (see "What's at Stake"). But some might wonder why *measuring* graduation rates is so contentious. It appears to be a relatively straightforward task, unlike, say, measuring science achievement. Just add up the graduates, subtract the dropouts, and presto, you have your rate. Yet it's not that simple, not by any means.

❯ Why are there so many different ways to calculate graduation rates?

The question of who completes high school is tied to the purposes for which the data are used. Some analysts and organizations are primarily interested in how to measure national trends over long periods of time. Others focus on how best to measure state, district, and school rates for educational and accountability purposes. With the exception of rates based on state longitudinal data, graduation rates are always estimates. They're not actual counts of individual students, but rather calculations based on aggregate data. Using different measures and rates, however, generates confusion about the extent of the dropout problem and what should be done to improve graduation outcomes.

Take, for example, the U.S. Department of Labor's 2008 annual report on the status of the nation's workforce, which, based on Census data, declared that more students are graduating from high school every year. Contrast this with the graduation rate published by the National Center for Education Statistics (NCES), known as the Averaged Freshman Graduation Rate (AFGR), and *Education Week*'s Cumulative Promotion Index (CPI), which both show that *fewer* students are graduating in the last couple of years—after trending slightly upward in the latter portion of the past decade (see Figure 1).[13]

Even so, all three are legitimate, because each answers key questions differently based on its intended purpose (see Table 1). First, we ask how a high school graduate, completer, or dropout is defined. For example, should the rate include students who receive nonstandard diplomas? Economists may not care so much about the distinction between a General Educational Development (GED) credential and a conventional high school diploma, but for educational purposes, that's a critical difference.

Next, we look at the data source for calculating rates. Rates are generally based on data from the Census Bureau, the NCES Common Core of Data (CCD), or state longitudinal data. Because each source has differing approaches to collecting data, the rates reflect the data's various strengths and weaknesses and portray significantly different pictures of how many students are graduating.

Let's examine each of these issues in turn.

Figure 1. Comparing three graduation indicators, 1996–2006
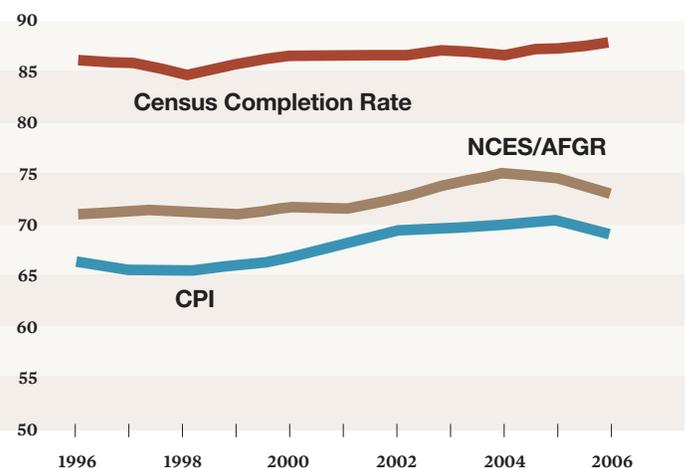
NOTES: NCES/AFGR: National Center of Education Statistics/ Averaged Freshmen Graduation Rate; CPI: Cumulative Promotion Index (*Education Week* calculation)

Sources:

Laird, J., Cataldi, E.F., Kewal Ramani, A., and Chapman, C. 2008. *Dropout and Completion Rates in the United States: 2006.* NCES 2008-053. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Table 11.

http://nces.ed.gov/pubs2008/ dropout06/index.asp, accessed May 5, 2009.

Snyder, T.D., Dillow, S.A., and Hoffman, C.M. 2009. *Digest of Education Statistics 2008.* NCES 2009-020. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Table 106.

Education Week, http://www. edweek.org/media/ew/dc/2009/ GraduationTrend1996-2006.xls, accessed July 1, 2009.

Table 1. Key Variables That Differentiate Graduation Rates	
Who is a graduate?	What is the definition of a graduate?
	How is the number of first-time ninth graders calculated?
	How are students with nonstandard diplomas and GEDs counted?
	How are dropouts differentiated from students who transfer to a different educational program?
Data sources	NCES CCD
	Census Bureau's Current Population Survey (CPS)
	Census Bureau's American Community Survey (ACS)
	NCES National Educational Longitudinal Survey (NELS)
	State longitudinal data systems

⊘ Who is a graduate?

When a student enters high school, he or she can follow several paths to reach graduation. Although many enter high school and graduate four years later without interruption, other students experience major life events and are forced to transfer to another school, or even leave school for a time before returning (see Figure 2). In addition, many who drop out actually drop out more than once.[14] To measure accurately how many students are truly graduating, calculations must take these "multiple paths" into account.

Four decisive questions set the stage for how graduation rates are measured:

1. Must students graduate within four years in order to be counted?
2. How is the number of first-time ninth graders calculated?
3. How are students with nonstandard diplomas and GEDs counted?
4. How are dropouts and transfer students accounted for in the rate?

Must students graduate within four years in order to be counted?

An important policy question is whether to include in the calculation students who take longer than four years to graduate.[15] On one hand, it's important to hold schools accountable for ensuring on-time graduation of students, which means that schools must report four-year graduation rates. On the other, it's essential to focus on graduation instead of "seat time"—meaning that schools should not be penalized if some students take longer than four years to receive their diplomas. Nor should schools be discouraged from holding back freshman who aren't ready for 10th grade or penalized for doing so. After all, it's not the high school's fault if entering students are not adequately prepared. Proponents of this school of thought advocate for "extended-year" graduation rates for high schools, which would account for students who take five or more years to graduate. Furthermore, recent research indicates that students who graduate late fare much better than students who receive a GED credential or drop out altogether. The extra work that late graduates and their high schools put into earning a diploma appears to be beneficial to those students. Those benefits lie not only in late graduates' academic outcomes, but in better jobs, involvement in civic life, and a commitment to healthy lifestyles.[16]

The issue is particularly salient for students with disabilities and recent immigrants with limited English proficiency (LEP). The majority of both groups graduate with regular high school diplomas, but some need extra time because of cognitive or language difficulties. Many states have counted disabled students as on-time graduates if their individual education programs (IEPs) specify that they need additional time to graduate, although this is no longer permissible under the recently adopted Title I regulations. (See more on this later in the paper.)

How is the number of first-time ninth graders calculated?

Figure 2. Student mobility and graduation outcome for a hypothetical high school
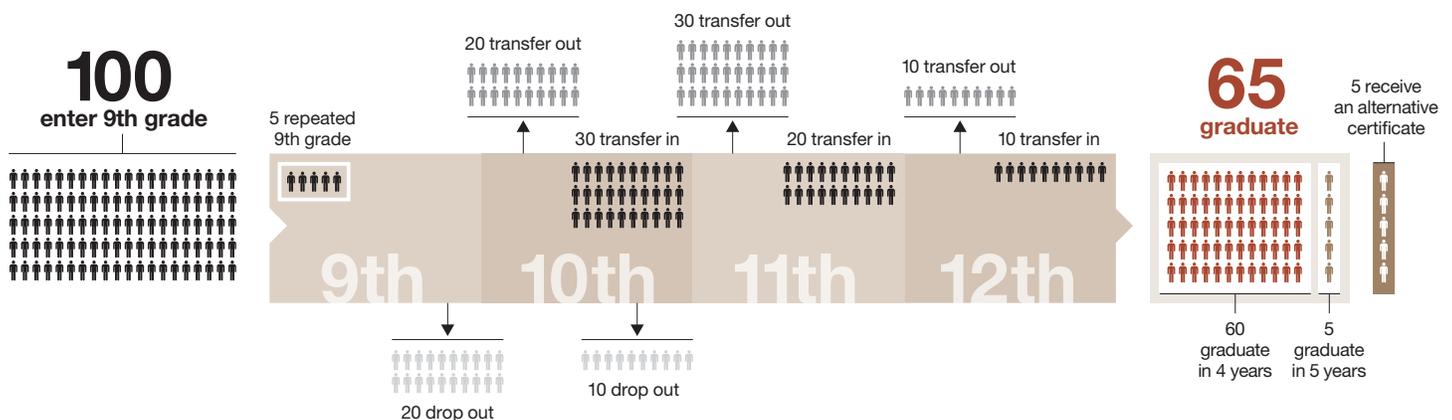
Source: U.S. General Accountability Office. 2005. *Education Could Do More to Help States Better Define Graduation Rates and Improve Knowledge About Intervention Strategies.* GAO-05-879. Washington, D.C.: GAO, p. 13.

Perhaps the simplest way to measure a graduation rate is to look at the percentage of 12th graders who start the school year in September and then subtract those who drop out before June. But this would be highly inaccurate, because it would ignore all high school students who drop out in the 9th, 10th, or 11th grades. Virtually all analysts, then, agree that high school graduation indicators should consider the number of high school graduates compared to the number of 9th graders four years earlier.

But there's a problem. NCES' CCD, one of the most widely used data sources for calculating graduation rates, indicates only total 9th grade enrollment—not how many students are in 9th grade for the first time.[17] This is important because, as several analysts have argued, any calculation that simply uses 9th grade enrollment potentially overstates the graduation rate because that number would include students who've been held back from the previous year's class. This effect, often referred to as the 9th grade "bulge," might become more of an issue as efforts to reduce social promotion intensify.[18] Still, more research needs to be done to understand the true nature of the bulge and to what degree grade retention may account for it.[19] Not all analysts agree that adjustments need to be made. Consequently, several, but not all, of the indicators described later in this paper attempt to smooth this bulge by averaging it with 8th- and 10th-grade enrollments. To the extent that 9th grade enrollment data *are* inflated, however, graduation calculations based on those data will indeed overstate the graduation rate for that class.[20]

How are students with nonstandard diplomas and GEDs counted?

How we account for GED recipients and students with nonstandard diplomas has a considerable affect on graduation rates. When they're excluded from the rate, it's to ensure that the rate reflects the proportion of students who graduate with a regular diploma and have met state standards for what they should know and be able to do once they leave high school.

Nonstandard or modified diplomas, certificates of attendance, and GEDs do not demonstrate that students possess such knowledge and skills. Furthermore, research shows that GED recipients perform significantly worse in postsecondary education and in the workforce when compared to conventional graduates.[21]

This is no small issue because the number of GED recipients is quite large. Including GED recipients can inflate graduation rates nearly eight percent when they're counted as high school graduates.[22] Counting GED recipients as graduates may be useful in answering certain policy questions about educational credentials and attainment. But given the huge disparities in outcomes for GED recipients versus graduates, it's clear that receiving a GED is not equivalent to completing high school and receiving a high school diploma.

Then there's the issue of nonstandard diplomas and certificates of attendance that are routinely given to students with disabilities. These students receive such credentials for remaining in school in accordance with their IEPs. Some states treat these nonstandard diplomas as regular high school diplomas for purposes of graduation rates. But not every state offers an alternate diploma, which further affects the comparability of graduation rates from one jurisdiction to the next.

How are dropouts and transfers accounted for in the rate?

Most graduation indicators rely on aggregate counts of students instead of tracking the progress of individual students to determine whether or not they graduate. Such estimates, though, cannot accurately differentiate among students who drop out of school and those who transfer to another school, district, or state. A student can disappear from his or her school or district, but it's not always clear why or where they go.

In well-designed longitudinal data systems, however, states have certain data codes that are used to account for why students leave a particular school or district and whether they should be counted as dropouts or as transfer students. States can have many school "leavers" and it can take a tremendous amount of resources to determine whether those individual students have, for example, transferred to another school in another jurisdiction, started homeschooling, or started a GED program. If students cannot be accounted for, some states leave them out of the denominator entirely instead of counting them as dropouts. States also omit some students who *can* be accounted for, such as expelled students, believing that these students should not count as non-graduates. Texas, for example, has had a longitudinal data system in place for more than ten years and has made tremendous strides in improving data quality. Still, in 2006-2007, it could not account for 0.7 percent of its students in grades 7-12—that's a whopping 13,316 youngsters.[23] Other states just getting their systems under way will face similar challenges in accounting for all their pupils.

⊘ Data sources and graduation indicators

The issues described up to now account for most of the differences in graduation rates. But it's also important to understand how data sources affect rates. There are two basic types of indicators:

A population-based indicator is calculated using data from the Census about the level of educational attainment of specific age groups.[24] They aren't useful as high school performance measures because the rates can't be calculated for individual schools, and in some cases not even for states. Plus, this type of self-reported data overestimates the number of adults who have graduated because people tend to be reluctant to report that they dropped out of high school. These indicators also overstate the true graduation rate because they include nonstandard diplomas as well as GEDs.

A performance-based indicator is the ratio of students who have achieved graduation to students who have attempted to achieve it. Performance-based rates are most relevant to accountability discussions because, unlike population-based indicators, they can be calculated at the school level and yield information about what proportion of students in a particular cohort actually achieve a standard diploma within a certain number of years. These indicators are generally calculated using the NCES CCD, which includes enrollment counts and diploma data at the state, district, and school levels.[25]

Today, most analysts agree that, for accountability discussions at the state, district, and school level, performance-based measures are superior to population-based indicators. There is also broad agreement among many researchers that graduation indicators based on CCD data are superior to those based on Census data.[26] The inclusion of nonstandard diplomas and GEDs is the major reason why

Census-based rates are so much higher than CCD-based estimates and why CCD rates are more precise.

Indicators using the CCD are essentially a "snapshot" of high school student performance because they're based on aggregate counts of students, not on following individuals through high school. So even though CCD-based estimates are superior to Census-based indicators for accountability purposes, they are still estimates. State longitudinal data systems, which track individual student progress over time, have the potential to paint an even more accurate picture of who is graduating from high school.

Table 2 summarizes the key questions discussed in this section, along with how the various graduation-rate indicators (including some that haven't yet been discussed) answer those questions.

⊘ NCLB shines spotlight on inadequate measures

With the major questions at the heart of the graduation rate debate before us, let's move to how that debate has played out over the past decade, starting with the passage of NCLB.

When NCLB took effect in 2001, the conversation about graduation rates fundamentally changed. For the first time, schools, districts, and states were required to report their graduation rates and be held accountable for meeting state targets. Graduation rates were required to be a part of AYP determinations for high schools in addition to academic achievement. This was intended to ensure that schools didn't "push out" low-performing or at-risk students in order to meet achievement targets.

As a result, NCLB highlighted the role of graduation rates as gauges of high school accountability and raised the stakes for ensuring that graduation was measured accurately. It also established a definition of a graduation rate that most states at the time could not calculate, even though the definition was very general. As a result, the methodologies used to calculate graduation rates began to receive serious scrutiny.

Before NCLB, NCES routinely reported three separate graduation rates:

1. A population indicator based on Census data that measures the percentage of people aged 18 to 24 who have completed high school (status completion rate)

2. A school-based rate that measures the percentage of students who graduate in a specific year by summing four years of drop-out data (NCES "leaver rate")

3. A "hybrid" that's the ratio of high school graduates to the population that is age 17 in a specific year[27]

The inadequacies of the status rate and the NCES leaver rates were highlighted in several studies (referenced in Table 2 and discussed later). These studies found that national and state rates were much lower than the Census completion rate and state-reported leaver rates.
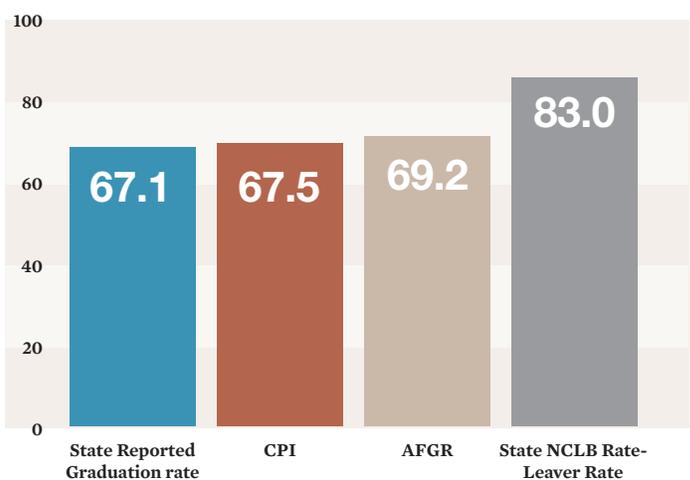
Using CCD instead of Census data, Jay Greene and Marcus Winters of the Manhattan Institute, and Chris Swanson for the Urban Institute, each developed their own methodology for calculating rates. They found that close to *one-third* of students don't graduate with a regular high school diploma.[28] Paul Barton of the Educational Testing Service came to similar conclusions.[29] Their findings caused a significant stir in the education community given the grim picture

they painted, and increased pressure to establish consistent national guidelines.

Economists Lawrence Mishel and Joydeep Roy of the Economic Policy Institute (EPI), however, challenged the idea that Census-based graduation rates are fatally flawed, arguing that CCD is problematic because—among other issues—it doesn't include a count of first-time freshmen.[30] They asserted that the newer methodologies significantly overstated the drop out "crisis" and hampered the development of appropriate remedies to address disparities in education. According to their calculations, graduation rates have been steadily improving for the last 30 to 40 years, especially for minorities.[31] Mishel and Roy recommended a number of adjustments to Census data in order to continue using it as measure of the national graduation rate.

Subsequently, two other economists, James Heckman from the University of Chicago and Paul LaFontaine of the American Bar Association, conducted their own analysis of national graduation-rate data. They raised CCD data use issues similar to those raised by Mishel and Roy. Using a wide variety of sources, Heckman and LaFontaine concluded that graduation rates have been sagging for 40 years and are much lower than the Census-based rate, though not as low as the CCD-based estimates of Greene and Swanson. The rates calculated by these economists, however, are complex, not particularly transparent, and useful primarily for discussions of national trends—not for discussions related to accountability for improving graduation rates in states and schools.

Figure 3. California's graduation rates for the class of 2006

| State Reported Graduation rate | CPI | AFGR | State NCLB Rate-Leaver Rate |
| 67.1 | 67.5 | 69.2 | 83.0 |

Sources:

California Department of Education. http://dq.cde.ca.gov/dataquest/CompletionRate/comprate1.asp?cChoice=StGradRate&cYear=2005-06&level=State, accessed June 24, 2009.

Snyder, T.D., Dillow, S.A., and Hoffman, C.M. 2009. *Digest of Education Statistics* 2008. NCES 2009-020. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Table 106.

Education Week, http://www.edweek.org/media/ew/dc/2009/GraduationTrend1996-2006.xls, accessed June 24, 2009.

Table 2. Major Graduation Rate Indicators

Rate	How it Works	Data Source	Must students graduate within four years?	How is the number of first-time 9th graders calculated?	Does it include GEDs and nonstandard diplomas?	Are dropouts and transfers accounted for in the rate?
			Key Questions			
Population-Based Rates						
Census High School Completion Indicator	This rate represents the percentage of individuals aged 18 to 24 who aren't enrolled in high school and who have earned a high school diploma or equivalent credential, including a GED. It's calculated by dividing the number of persons aged 18 to 24 with a high school credential in a given year by the number of persons aged 18 to 24 not enrolled in K-12 in that particular year. As a population-based measure, this indicator isn't designed to measure the performance of a single class of students attaining a high school diploma four years later. Nor does it include the location (i.e., state) where they may have received their diploma.	CPS	No.	Not applicable to population-based rates.	Yes.	Not applicable to population-based rates.
NCES Digest Graduation Indicator	This indicator is based on the total number of graduates from public and private schools as a percentage of the total number of 17-year-olds in a given year. NCES no longer publishes this rate.	CPS	No.	Not applicable to population-based rates.	Yes.	Not applicable to population-based rates.
Performance-Based Rates						
Averaged Freshman Graduation Rate (AFGR)	This rate is the primary measure of graduation rates currently reported by NCES. It calculates graduation rates for a given year based on the number of on-time graduates receiving a regular diploma in a given year divided by an estimate of the number of first-time 9th graders three years earlier. Averaging the 9th-grade enrollment is intended to account for higher grade retention among 9th graders. NCES finds this to be the most accurate indicator among those using CCD data.	CCD	Although this is a measure of on-time graduation, the rate includes all students receiving a diploma in a given year, even though the student may have taken fewer or more than four years to graduate. This is due to the limitations of CCD data.	Not limited to first-time 9th graders. To account for this, the rate averages the 8th grade enrollment from four years prior with the 9th-grade enrollment from three years prior and the 10th-grade enrollment from two years prior.	No.	No.
Greene's Graduation Indicator	This indicator, developed by Jay Greene and Marcus Winters of the Manhattan Institute, is very similar to the AFGR but is more complex in how it achieves its estimate of 9th-grade enrollment. In addition to estimating first-time freshman by averaging enrollments, it includes a measure of the rate of change in the high school population between grades 9 and 12 that's used to estimate the number of graduates four years later. The "change-in-enrollment calculation" controls for shifts in enrollment due to student migration which occur apart from dropouts.	CCD	Although this is a measure of on-time graduation, the rate includes all students receiving a diploma in a given year, even though the student may have taken fewer or more than four years to graduate. This is due to the limitations of CCD data.	Not limited to first-time 9th graders. To account for this, the rate averages the 8th- grade enrollment from four years prior with the 9th-grade enrollment from three years prior and the 10th-grade enrollment from two years prior.	No.	Includes a measure of high school population change to control for student migration.

Table 2. Major Graduation Rate Indicators (Continued)						
			KEY QUESTIONS			
RATE	**HOW IT WORKS**	**DATA SOURCE**	*Must students graduate within four years?*	*How is the number of first-time 9th graders calculated?*	*Does it include GEDs and nonstandard diplomas?*	*Are dropouts and transfers accounted for in the rate?*
Performance-Based Rates (Continued)						
NCES Leaver Rate	**The leaver rate is still used by the majority of states for reporting purposes under NCLB, even though NCES no longer reports on leaver rates.** It's not a true graduation rate; instead, it measures school departures. It doesn't focus on estimating the number of first-time 9th graders. Instead, it uses dropout data and data on graduates and alternate completers. The indicator estimates the number of high school completers in a given year based on the count of dropouts from four consecutive grades over four consecutive years. The general formula divides the number of students with a diploma in the current year by the number of completers and the number of dropouts from the current year and each of the three previous school years (i.e., 11th graders the previous year, 10th graders two years prior, and 9th graders three years prior).	CCD	There are different versions of a leaver rate. It wasn't intended to be a measure of on-time graduation. States are required to include only students getting a regular diploma in four years or less in the numerator for AYP purposes (and many include students with disabilities and/or students with limited English proficiency who take extra time).	N/A	For AYP, each state is required to include only regular diploma recipients.	No.
Cumulative Promotion Index (CPI)	**Developed by Christopher Swanson, this indicator is currently used in** *Education Week's* **"Diploma Counts" reports.** The CPI measures the probability that a student entering the 9th grade will complete high school with a regular high school diploma four years later. It views graduation as a process, not an event, by measuring grade-to-grade promotions (9 to 10, 10 to 11, 11 to 12). The CPI uses 9th-grade enrollment counts without adjustments.	CCD	Although this is a measure of on-time graduation, the rate includes all students receiving a diploma in a given year, even though the student may have taken fewer or more than four years to graduate. This is due to the limitations of CCD data.	Uses 9th-grade enrollment counts without adjustments.	No.	No.

Table 2. Major Graduation Rate Indicators (Continued)						
			KEY QUESTIONS			
RATE	**HOW IT WORKS**	**DATA SOURCE**	*Must students graduate within four years?*	*How is the number of first-time 9th graders calculated?*	*Does it include GEDs and nonstandard diplomas?*	*Are dropouts and transfers accounted for in the rate?*
Performance-Based Rates (Continued)						
Adjusted Cohort Graduation Rate (ACGR)	**This type of indicator is required by the new Title I regulations. It's also what the governors agreed to as part of the NGA compact; still, the ACGR and the compact rate do differ somewhat.** Unlike estimates using the CCD, this rate is calculated by tapping individual student data from state data systems; it produces a clearer picture of what happens to students in high school and a much more accurate count of first-time 9th graders. The rate calculates the number of students who graduate with a (regular) high school diploma by documenting transfers into and out of the cohort. In other words, it divides the number of students who graduate within four years with a (regular) high school diploma by the number of students who form the adjusted cohort for the graduating class. (These adjustments are made for students who transfer out of the school, emigrate to another country, or die.) The ACGR can be used to calculate four-year, on-time graduation rates, as well as extended-year high school graduation rates. It's dependent on implementation of a high-quality state data system and accurate data collection down to the school level.	State longitudinal data	Yes (in the U.S. Department of Education's regulations, though, states may also calculate extended-year rates for use in AYP determinations). Yes (in the NGA compact rate, states can reassign students to different cohorts if they're on track to take more than four years to graduate (e.g., students with disabilities with an IEP that calls for six years to receive a diploma)).	Since individual student data are used, actual counts of first-time ninth-graders are included in the rate.	No (in the Department's regulations). Yes (in the NGA compact rate, states may include students receiving a modified diploma).	Yes.

The methodological debate is certainly more than differing opinions of how many high school graduates or dropouts are dancing on the head of the pin. Figure 3 demonstrates what a difference the measures make in the calculation of the state graduation rate for California, which reports, for NCLB purposes, a rate of 85 percent using a leaver rate calculation. But it also reports a graduation rate of 67 percent—a differential of 18 percentage points! Appendix A (Table A-1) shows how state-reported rates differ from the AFGR.

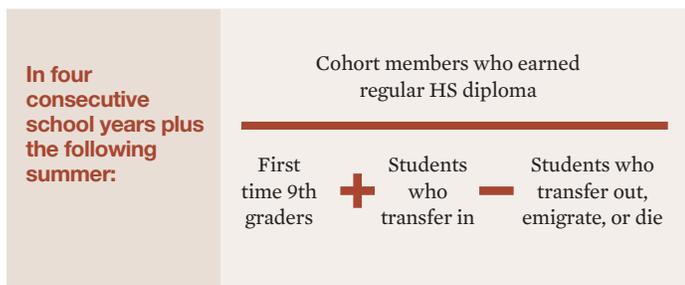## The Adjusted-Cohort Rate: Future gold standard?

The National Institute of Statistical Sciences (NISS), NCES, and the National Governors Association (NGA) have recommended that the Adjusted Cohort Graduation Rate (ACGR), derived from state longitudinal data systems, be considered the gold standard. Because today's students are relatively mobile, accurate reporting of graduation rates requires data on progression from grade to grade; on graduation status; and on those who transfer in and out of a school, district, or state during the four-year period.[32] Implementing the ACGR entails building state longitudinal data systems of sufficient quality to produce reliable rates. The next section describes in more detail where states are now in their capacity to produce these rates.

Not all experts agree that the future rests entirely with longitudinal rates. Some analysts, like Jay Greene, have argued that the cost and time involved in tracking students and the lack of capacity at the school level to account for students make it difficult to produce accurate rates. He and others, such as ETS' Paul Barton, argue that the incentive to not report students as dropouts will also affect the rate. Instead, they believe, it's better to rely on enrollment data, which states have every incentive to report accurately for funding purposes. Plus, tracking attendance rates is far cheaper than tracking students who disappear from a school.[33]

The NGA Compact rate

Mounting dissatisfaction emerged over implementation of the NCLB graduation-rate requirements under Education Secretary Rod Paige. Some expressed frustration that the U.S. Department of Education required only the reporting of graduation rates disaggregated by racial and other subgroups; these disaggregated rates were not used for accountability purposes. The Department was concerned that holding schools to account for boosting their disaggregated graduation rates would overburden AYP requirements. Given that concern,

Figure 4. NGA Compact Agreement formula

In four consecutive school years plus the following summer:	Cohort members who earned regular HS diploma
	First time 9th graders **+** Students who transfer in **−** Students who transfer out, emigrate, or die

the Department believed that reporting the disaggregated rates would be sufficient to ensure accountability for the graduation rates of all groups of students.[34]

Many in the field were also concerned that states were requiring very little of districts and schools in their graduation rate goals.

Table 3. NGA Compact Rate and the 2008 Federal Regulation: Key Differences		
	NGA RATE	**2008 TITLE I REGULATION**
Include modified diplomas?	Yes, for students with disabilities.	No, can only include recipients of standard diplomas aligned with state standards.
Permit exceptions to include students who take longer to graduate?[39]	Yes, for students with disabilities and students with limited English proficiency (LEP).	No.[40]
Deadline and enforcement	No deadline or enforcement mechanism is in place, other than public reporting by NGA on state implementation.	States must begin reporting the rate for the 2010–2011 school year and using the rate for AYP determinations for the 2011–2012 school year. States must apply to receive an extension from the Secretary if they cannot meet the timeline to implement the ACGR. States out of compliance with any part of Title I are subject to several enforcement mechanisms, including the loss of funds.41

The graduation rate could increase by less than a percentage point a year forever, and states would still be in compliance with NCLB. And although the Department was required to ensure that states implemented the requirements for graduation rates, many states simply lacked the data or systems to comply. Not requiring uniform rates or rigorous targets, however, set the stage for significant dissatisfaction with accountability for high school graduation rates, in addition to concerns about measurement of the rate itself.

This dissatisfaction led NCES, in 2004, to create a graduation rate task force convened by NISS. The task force, which issued its report in 2005, recommended that states implement the ACGR. This then paved the way for the NGA Compact Agreement in 2005—in which all 50 governors agreed to begin taking steps to implement an ACGR (see Figure 4). Although there was consensus on the formula, the agreement did not include a timeline or a deadline for states to implement it.[35]

Once the compact was agreed to in 2005, however, states had to work hard to install the essential components of longitudinal data systems. Most states could not implement the rate right away; only 14 states had the capacity at the time.[36] According to the Data Quality Campaign (DQC), an organization focused on improving education data and state data systems, four critical elements must be in place before states can calculate an ACGR.[37] Today, 42 states have all four elements in place, demonstrating significant progress in just four years.[38]

According to 2008 data collected by NGA, sixteen states reported that they use the Compact formula to calculate their high school

graduation rates. Since the 2008 regulation, most states appear to be on track: only three states have indicated to the Department that they may need more time to meet the timeline in the regulation.

◗ 2008 regulations

The consensus around the NGA Compact Agreement illustrated the states' willingness to tackle the graduation issue and created a "bully pulpit" to push states forward. An emboldened Department, led by Secretary Margaret Spellings, decided to regulate the matter and codify the agreement in the absence of the reauthorization of NCLB. The regulations required states to use the ACGR for accountability purposes under Title I by 2011–2012. Though very similar, the rate required in the regulation differed from the NGA Compact rate in a couple of key areas (see Table 3 and Appendix A, Table A-2).

Spellings also believed that the old (2002) regulations needed tightening, particularly around the goals and targets that states set for AYP purposes (see Table 4).[42] So, the 2008 regulations required states to set the *same goal* for all schools in the state (for example, an 80 percent graduation rate), although the goals didn't have to be met by a certain deadline. At the same time, states were permitted to set *lower annual targets* for individual schools, as long as those targets "reflect continual and substantial progress" toward the goal.[43] The final federal regulation also requires all states to use disaggregated graduation rate data in their AYP determinations in the 2011–2012 school year—and not only for reporting, as was previously required.

Under the 2008 changes, states are required to set four-year graduation rate goals and targets for all students. The regulation, though, does account for the fact that certain students might take longer to graduate. As a result, it permits states to calculate an extended-year rate for students who take longer than four years to graduate, but—and this is important—these students must count as *non-graduates* in the school's four-year rate. Both the four-year and extended-year rate can be used for AYP. The regulation does not stipulate, however, how states should do this, only that the Secretary "prefers" that schools are held accountable for graduating the vast majority of its students within four years.[44]

Whether the Title I regulations will ensure implementation of the ACGR remains to be seen. As indicated, the NGA Compact was a voluntary agreement among the 50 states. The Title I regulation is not. Title I, though, does set forth a means for enforcing ACGR implementation, because states that don't comply with the regulation will be subject to enforcement action by the Department. Of course, how stringently the Department chooses to wield this power is anyone's guess. Fortunately, most states are making good progress in implementing the rate. As of this writing, only two states (Wisconsin and Kentucky) and one territory (Puerto Rico) appeared to need additional time to meet the reporting deadline; the Department granted the requests of KY and PR, but denied WI.[45]

On the whole, given states' typical foot-dragging when it comes to increasing standards for their students, the NGA Compact Agreement was surprisingly successful in catalyzing their implementation of the ACGR. Now, the federal regulation, if seriously enforced, will help ensure that states fully implement the ACGR and use it for accountability purposes—something the Compact alone could not do.

Table 4. Comparison of Graduation Rate Accountability Requirements under NCLB		
	2002 REGULATION	**2008 REGULATION**
Disaggregation by Racial and Other Subgroups	Only required for reporting purposes.	Required for reporting and accountability. In order for high schools to make AYP, they must hit graduation-rate targets for each of their subgroups.
Goals and Targets	States were not required to increase their graduation-rate goals over the course of the law's implementation.	States must set (a) a single graduation-rate goal that represents the rate the state expects all high schools in the state to meet and (b) annual graduation-rate targets that reflect continuous and substantial progress toward meeting or exceeding the state's graduation-rate goal. States, however, are not required to set a timeline or deadline to meet the goal.

Lingering Questions:
Has the Debate Been Settled?

With the NGA Compact and the new Title I regulation on graduation rates in place, we might think that the issue of measuring graduation rates is all but settled. Yet several lingering questions remain that will have an effect on whether the ACGR truly brings us closer to a uniform and accurate graduation indicator:

How will the Obama Administration enforce the Title I rate regulations?

Many supporters of strong accountability for graduation rates hailed these regulations. Secretary Arne Duncan's letter to the states in April 2009 indicates that the Administration agrees with the policy in the regulation.[46] The impact of the policies, though, will be significantly affected by how the Obama Administration enforces them, and whether they are changed should Congress revisit the issue in the upcoming ESEA reauthorization.

Will states meet timelines?

Even though DQC reports that all states but one are on track, several may find it challenging to meet the timelines in the regulation (three have already requested extensions). Will the administration grant additional time beyond 2011 to meet the requirements?

Will states expect continuous and substantial progress?

Will the U.S. Department of Education intervene if states set graduation goals that aren't aggressive enough?

How will four-year and extended-year rates be used for accountability purposes?

The federal regulations left important questions about using graduation rates for accountability purposes unanswered. Should the four-year rate count more, or should extended-year rates be an equal measure for AYP determinations?

Will states continue to improve their capacity and data quality?

Calculating an ACGR using state longitudinal graduation rates holds tremendous promise for increasing the accuracy of graduation rates. But both Uncle Sam and the states will need to maintain and improve data quality. States need to ensure that students are correctly recorded as transfers because there will be a strong incentive to count dropouts as transfer students in order to inflate graduation rates. Most states have a policy that codes students as dropouts if their true status cannot be determined, but it is not clear that this policy is consistently implemented. To address this issue, NGA recommends that states create guidelines for the use and documen-

tation of student exit codes and provide appropriate training, as well as audits, to verify local data collection and record keeping. [47]

States have already been recipients of various grants from the Institute of Education Sciences (IES) to improve their systems. In addition, states will be able to apply for $250 million in new federal dollars for their data systems as part of the *American Recovery and Reinvestment Act of 2009*. How will these funds improve current systems and expedite the implementation of state longitudinal data systems and the ACGR?[48]

❷ The next frontier: graduation rates and high school accountability

Now that we're closer to having the necessary data to determine accurately who's graduating and who's not, we move on toward the next frontier: What should accountability for high schools look like at the federal or state level or both? Should high school graduation rates even be used for accountability? If so, how?

That frontier still lies ahead, in part, because the graduation-rate debate put the cart before the horse. Even though NCLB helped trigger the debate, the assessment and accountability mechanisms under Title I are primarily centered on grades K-8 and, in the opinion of many, not particularly well suited to the idiosyncrasies of high schools.[49]

It does little good to have more accurate graduation rates for accountability purposes if they aren't matched with appropriate interventions to improve high schools and student achievement. Only about ten percent of federal Title I dollars go to high schools even though they enroll 23 percent of all low-income students.[50] Only schools that receive Title I funds are subject to the interventions of NCLB, including choice and supplemental services. Consequently, unless the recent significant funding increase for Title I sends more dollars to high schools, increasing expectations for graduation rates under Title I will trigger few consequences for the vast majority of those schools.

Graduation rates were originally included in NCLB to ensure that students were not pushed out of school to inflate achievement for AYP. There wasn't a significant focus on how best to hold high schools to account, or even to bring about stronger graduation rates. It wasn't even completely clear how Congress intended graduation

rates to be used for AYP, which led to the 2002 Department regulations that caused such dissatisfaction.

The cart also impedes the horse's progress because there are many unresolved questions about what graduation rates say or don't say about the effectiveness of an individual high school. Aren't the rates also a measure of the K-8 system that feeds students into high school? Should schools be penalized if their students sometimes take longer to graduate, particularly if the goal is for all students to receive a regular diploma? How will the current push for states to make their content standards more rigorous affect graduation rates? How will increasing expectations change how a high school educates its students? If schools are sanctioned for low graduation rates, will they make it easier to graduate? What should interventions look like? What has been successful in reducing the number of dropouts in a school? Although the Department of Education's What Works Clearinghouse (WWC) has evaluated the evidence to determine what programs have been effective, its findings were not conclusive.[51]

Improving the measurement of graduation rates should also lead to clearer understanding of why students drop out, which in turn should point the way toward how to keep them in school. For example, state longitudinal data can provide a wealth of information about who's leaving school, which can help to identify students at risk of falling off track for graduation.[52] By using historical student-level performance data, states can identify those who arrive in high school ill-prepared for rigorous coursework and who may need targeted intervention.[53] Knowing which students are likely to drop out is an important first step in reducing dropout rates.

There's also the challenge of increasing expectations for gradua-tion *and* graduation rates at the same time, an issue that has received a fair amount of attention lately. What can be done to ensure that graduation rate goals are met without watering down the requirements for graduation? Will states take the easy road and redefine a standard diploma, much like states have redefined proficiency with respect to their assessments?

Still, the United States is closer than ever to having a comparable graduation rate across the states, and the increased transparency of reporting on such a rate should have a significant effect on public accountability. Yet what it means to graduate from high school will continue to vary by state. Academic content standards differ, as do course requirements. For example, Wyoming mandates only 13 credits to graduate while Washington requires 24.[54] It would be ironic if achieving a uniform graduation rate led to increasing disparities between states in the meaning of a high school diploma—resulting in an "illusion" of improved graduation rates at the expense of student achievement. Achieve issued a report in February 2009 showing the progress that states have made in implementing career- and college-ready graduation standards since 2005.[55] Twenty-one states now have those standards in place and eight plan to put them in place for the 2009–2010 school year. Increasing graduation rates should not come at the expense of slowing such progress.[56]

Improved measurement of high school graduation rates holds tremendous promise for improving graduation rates and educational outcomes, but many questions remain. We want to see our nation return to its historic role at the head of the class, but not at the expense of lowering its intellectual expectations. Improved data systems and measures of graduation rates are useless if they don't lead to better outcomes for students. ∎

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Endnotes

1   Barack Obama, "Remarks by the President to the Hispanic Chamber of Commerce on a Complete and Competitive American Education," (speech by the President of the United States, March 10, 2009, Washington, D.C.), http://www.whitehouse.gov/the_press_office/Remarks-of-the-President-to-the-United-States-Hispanic-Chamber-of-Commerce, accessed March 23, 2009.

2   For example, see "A belated reaction Obama's Education Speech—real problems," (blog post by "teacherken" on *Daily Kos*, March 14, 2009), http://www.dailykos.com/story/2009/3/14/83816/6049/436/708415, accessed April 28, 2009

3   U.S. Department of Education. "Title I—Improving the Academic Achievement of the Disadvantaged, Final Rule," 34 CFR Part 200, *Federal Register* 73, no. 210 (October 29, 2008): 64436

4   Organization for Economic Cooperation and Development (OECD), *Education at a Glance 2008: OECD Indicators*, (Paris, FR: OECD, 2008), 43, http://www.oecd.org/document/9/0,3343,en_2649_39263238_41266761_1_1_1_1,00.html#5, accessed January 28, 2009

5   OECD, *Education at a Glance 2008,* 202

6   James J. Heckman and Paul. A. LaFontaine, "The American High School Graduation Rate, Trends and Levels," (Cambridge, MA: National Bureau for Economic Research, 2007), 3, http://www.nber.org/papers/w13670, accessed July 14, 2009

7   Christopher Swanson, *Cities in Crisis: A Special Analytic Report on High School Graduation*, (Bethesda, MD: Editorial Projects in Education Research Center, 2008), 1, http://www.edweek.org/media/citiesincrisis040108.pdf, accessed January 28, 2009. See also Robert Balfanz and Nettie Letgers, "Locating the Dropout Crisis: Which High Schools Produce the Nation's Dropouts? Where Are They Located? Who Attends Them?," (Baltimore, MD: Johns Hopkins University, 2004), 3

8   Robert Balfanz, "The Federal Role In Transforming the Secondary Schools that Undermine the Nation's Competitiveness and Drive its Dropout Crisis," (testimony before the House Education and Labor Committee at hearing on "American's Competitiveness through High School Reform, May 12, 2009), http://edlabor.house.gov/documents/111/pdf/testimony/20090512RobertBalfanzTestimony.pdf, accessed June 18, 2009

9   Swanson, *Cities in Crisis*, 17

10   U.S. Department of Labor, "America's Dynamic Workforce," (Washington, D.C.: Author, 2008), 34

11   U.S. Department of Labor, "America's Dynamic Workforce," 37

12   Nicholas Freudenberg and Jessica Ruglis, "Reframing School Dropout as a Public Health Issue," *Preventing Chronic Disease* 4, no.4 (2007), http://www.cdc.gov/pcd/issues/2007/oct/07_0063.htm, accessed March 31, 2009

13   U.S. Department of Labor, "America's Dynamic Workforce," 38

14   BethAnn Berliner, Vanessa X. Barrat, Anthony B. Fong, and Paul B. Shirk, "Reenrollment of High School Dropouts in a Large Urban School District," Issues & Answers Report, REL 2008-No. 056, (Washington, D.C.:

U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance REL-West, 2008), http://ies.ed.gov/ncee/edlabs/regions/west/pdf/REL_2008056.pdf

15   Note that although several graduation indicators are estimates of on-time graduation rates, analysts applying those indicators use CCD data on the number of graduates that might include students who were held back a grade or graduated early. State longitudinal data systems offer the best hope of accurately counting the number of students who take four years to graduate.

16   Jim Hull, "Better Late than Never: Examining Late High School Graduates," (web document, Center for Public Education, February 11, 2009), http://www.centerforpubliceducation.org/site/c.lvIXIiN0JwE/b.5056891/apps/s/content.asp?ct=6857881, accessed July 2, 2009

17   The exception to this is if a state's graduation rate is derived from a state longitudinal data system that documents individual student transfers in and out of a school.

18   Paul E. Barton, *Chasing the High School Graduation Rate*, (Princeton, NJ: Educational Testing Service, 2009), 11

19   Daniel Losen, Gary Orfield, and Robert Balfanz, "Confronting the Graduation Rate Crisis in Texas," (Cambridge, MA: The Civil Rights Project at Harvard University, 2006), footnote 32, http://www.civilrightsproject.ucla.edu/research/dropouts/texas_10-17-06.pdf. See also Joydeep Roy and Lawrence Mishel, "Using Administrative Data to Estimate Graduation Rates: Challenges, Proposed Solutions and Their Pitfalls," *Education Policy Analysis Archives* 16, no. 11 (2008): 3, http://epaa.asu.edu/epaa/v16n11/v16n11.pdf.

20   Heckman and LaFontaine, "The American High School Graduation Rate," 8. See also John H. Tyler, "Economic Benefits of the GED: Lessons from Recent Research," *Review of Educational Research* 73. no. 3 (2003): 369–403.

21   Heckman and LaFontaine, "The American High School Graduation Rate," 8, and Tyler, "Economic Benefits of the GED"

22   Heckman and LaFontaine, "The American High School Graduation Rate," 10

23   Texas Education Agency, "Secondary School Completion and Dropout Rates, 2006-07," (Austin, TX: Department of Assessment, Accountability, and Data Quality, Division of Accountability and Research, TEA, 2008), http://ritter.tea.state.tx.us/research/pdfs/dropcomp_2006-07.pdf

24   Up until 2008 these data were collected through the CPS. In 2008 the data collection was moved to the American Community Survey (ACS) with the intention of improving data for underreported populations. Both surveys are conducted by the Bureau of Labor Statistics (BLS).

25   For a detailed discussion of advantages and disadvantages of different graduation rate calculations, see Marilyn Seastrom, Chris Chapman, Robert Stillwell, Daniel McGrath, Pia Peltola, Rachel Dinkes, and Zeyu Xu, "User's Guide to Computing High School Graduation Rates, Volume 1:

Review of Current and Proposed Graduation Indicators," Washington, D.C.: U.S. Department of Education, National Center for Education Statistics), NCES 2006-604, http://nces.ed.gov/pubs2006/2006604.pdf; and Appendix 1 in Lyndsay Pinkus, "Who's Counted? Who's Counting? Understanding High School Graduation Rates," (Washington, D.C.: Alliance for Excellent Education, 2006), http://www.all4ed.org/files/WhosCounting.pdf

26   John Robert Warren and Andrew Halpren-Manners, "Is the Glass Emptying or Filling Up? Reconciling Divergent Trends in High School Completion and Dropout," *Educational Researcher* 36, no. 6 (2007): 341. See also Jay P. Greene and Marcus A. Winters, "Public High School Graduation and College Readiness Rates, 1991–2002," (New York: Manhattan Institute for Policy Research, 2005) and Christopher B. Swanson and Duncan Chaplin, "Counting High School Graduates When Graduates Count: Measuring Graduation Rates under the High Stakes of NCLB," (Washington D.C.: The Urban Institute, 2003).

27   Seastrom et al., *User's Guide*, 2.

28   See Greene and Winters, "Public High School Graduation and College Readiness Rates," and Swanson and Chaplin, "Counting High School Graduates When Graduates Count."

29   Paul E. Barton. "One Third of a Nation: Rising Dropout Rates and Declining Opportunities," (Princeton, NJ: Policy Information Center, Educational Testing Service, 2006), 3, http://www.ets.org/Media/onethird.pdf

30   Joydeep Roy and Lawrence Mishel, "Using Administrative Data to Estimate Graduation Rates: Challenges, proposed solutions and their pitfalls," *Education Policy Analysis Archives* 16(11), 2008: 3. http://epaa.asu.edu/epaa/v16n11/, accessed January 30, 2009. See also, Roy and Mischel, *Rethinking High School Graduation Rates and Trends*, (Washington, D.C.: Economic Policy Institute, 2006), 3

31   Roy and Mischel, *Rethinking High School Graduation Rates and Trends*, 3

32   Seastrom et al., *User's Guide*, v. See also National Center for Education Statistics, "Final Report, National Institute of Statistical Sciences/Education Statistics Service Task Force on Graduation, Completion and Dropout Indicators," NCES 2005-105, (Washington, D.C.: Author, 2005), http://nces.ed.gov/pubs2005/2005105.pdf

33   Greene and Winters, "Public High School Graduation and College Readiness Rates, 1991-2002," 8; Barton, *Chasing Graduation Rates,* 17

34   U.S. Department of Education, "Title I—Improving the Academic Achievement of the Disadvantaged, Proposed Rule," 34 CFR Part 200, *Federal Register* 73, no. 79 (April, 23, 2008): 22026

35   National Governors Association, "Graduation Counts: A Report of the Task Force on State Graduation Data," (Washington D.C.: Author, 2005), http://www.nga.org/Files/pdf/0507GRAD.PDF

36   Data Quality Campaign (DQC). "Measuring What Matters: Creating Longitudinal Data Systems to Improve Student Achievement: Phase 1 Three Year Report," (Washington, D.C.: Author, 2008), 2, http://www.dataqualitycampaign.org/files/DQC_measuring_what_matters08.pdf

37   According to the DQC, the four critical elements to report the ACGR are:

   (1) A unique, statewide student identifier;
   (2) Student-level enrollment, demographic, and program participation information;
   (3) Student-level graduation and dropout data across years;
   (4) A state data audit system to assess data quality, accuracy and reliability.

38   DQC, "Measuring What Matters," 2

39   For example, if a student entering 9th grade in 2008 meets certain criteria set by the state, if he takes five years to graduate he could be counted as a member of the class for 2013 for purposes of a four-year rate calculation, and not counted as a non-graduate in the four-year rate for the class of 2012.

40   The proposed Title I regulation initially permitted cohort reassignment for limited groups of students, but the final regulation does not, in response to a larger number of commenters who believed that permitting cohort reassignment for students such as LEP students and students with disabilities would set low expectations for those groups of students up front. In addition, cohort reassignment was thought to increase the complexity of calculating the rate and reduce transparency and its comparability from one state to the next because states would have differing rules in place for any exceptions.

41   The preamble to the regulation explains that "Should a State not meet the 2010-11 deadline, the Secretary has the authority to take appropriate action, including, but not limited to placing a condition on a State's Title I, Part A grant, requiring the State to enter into a Compliance Agreement with the Department, or withholding Title I Part A funds." U.S. Department of Education, "Title I—Improving the Academic Achievement of the Disadvantaged, Final Rule," 64455

42   U.S. Department of Education, "Title I—Improving the Academic Achievement of the Disadvantaged, Final Rule," 22025

43   Non-regulatory guidance issued by the Department suggests that states could consider setting an additional target as a "floor," where schools above the floor would a have less aggressive target than those below it. Or, the floor could be used to determine that schools haven't made AYP if they're below that threshold. Another option could be to measure AYP by requiring schools below the goal to have reduced the percentage of students who didn't graduate by a certain percent from the previous year, similar to "safe harbor" calculations under AYP. Such a requirement would require more of schools that are farther away from the state goal. See U.S. Department of Education, "High School Graduation Rate: Non-Regulatory Guidance," (Washington, D.C.: Author, 2008), Question B-6, 16

44   U.S. Department of Education. "Title I—Improving the Academic Achievement of the Disadvantaged, Final Rule," 64459

45   Joseph C. Conaty, Delegated Authority to Perform the Functions and Duties of the Assistant Secretary for Elementary and Secondary Education, Letter to Elaine Farris, Interim Commissioner of Education, Kentucky, July 21, 2009; Joseph C. Conaty, Delegated Authority to Perform the Functions and Duties of the Assistant Secretary for Elementary and Secondary Education, Letter to Rafael Carlos Chardón, Secretary of Education, Puerto Rico, July 21, 2009; Joseph C. Conaty, Delegated Authority to Perform the Functions and Duties of the Assistant Secretary for Elementary and Secondary Education, Letter to Tony Evers, Secretary of Public Instruction, Wisconsin, July 21, 2009

46   Arne Duncan, U.S. Secretary of Education, Letter to Chief State School Officers, April 1, 2009, http://www.ed.gov/policy/elsec/guid/secletter/090401.html, accessed April 2, 2009.

47   NGA, *Implementing Graduation Counts 2008*, 7

48   Whether or not states improve their data capacity will also affect whether or not state longitudinal data can be used to calculate an ACGR for the entire nation. For example, states will need to release key data such as the state population in order to properly calculate a national rate using state longitudinal data. Unless someday there is reason to have absolute confidence in state data systems and their graduation indicators, graduation indicators such as the CPI and AFGR will continue to be important independent measures at the state level. Until there is a reliable national ACGR, such indicators will continue to be especially important for national graduation rates.

49   Alliance for Excellent Education, "In Need of Improvement: NCLB and High Schools," (Washington, D.C.: Author, 7), http://www.all4ed.org/files/NCLB_HighSchools.pdf

50   Jay G. Chambers, Irene Lam, Kanya Mahitivanichcha, Phil Esra, Larisa Shambaugh, Stephanie Stullich, "State and Local Implementation of the *No*

Child Left Behind Act, Volume VI—Targeting and Uses of Federal Education Funds," (Washington, D.C.: Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service, 2009), 48, http://www.ed.gov/rschstat/eval/disadv/nclb-targeting/nclb-targeting.pdf

51   Institute of Education Sciences, "Dropout Prevention," What Works Clearinghouse Topic Report, (Washington, D.C.: Author, 2008), http://ies.ed.gov/ncee/wwc/pdf/do_tr_09_23_08.pdf

52   Craig D. Jerald, "Identifying Potential Dropouts: Key Lessons for Building an Early Warning Data System," (Washington, D.C.: Achieve, Inc., 2006), 3, http://www.achieve.org/files/FINAL-dropouts_0.pdf

53   Data Quality Campaign (DQC), "Every Student Counted," (Washington, D.C.: Author, 2007) 1, 9, http://www.dataqualitycampaign.org/files/Publications-Every_Student_Counted-073107.pdf

54   Editorial Projects in Education, "Diplomas Count," *Education Week* 27, no. 40 (June 5, 2008), http://www.edweek.org/ew/toc/2008/06/05/index.html, accessed January 28, 2009

55   Achieve, Inc., "Closing the Expectations Gap: Fourth Annual 50-State Report on the Alignment of High School Policies with the Demands of College and Careers," (Washington, D.C.: Author, 2009), 12, http://www.achieve.org/files/50-state-2009.pdf

56   Whether or the standards are truly reflective of what high school students should be expected to know in order to graduate, the number of states that have meet Achieve's criteria should not go down as a result of increased expectations for graduation rates.

Appendix A:
Additional Graduation-Rate Data

Figure A-1. Organization for Economic Cooperation and Development (OECD) Graduation-Rate Data—International Rankings
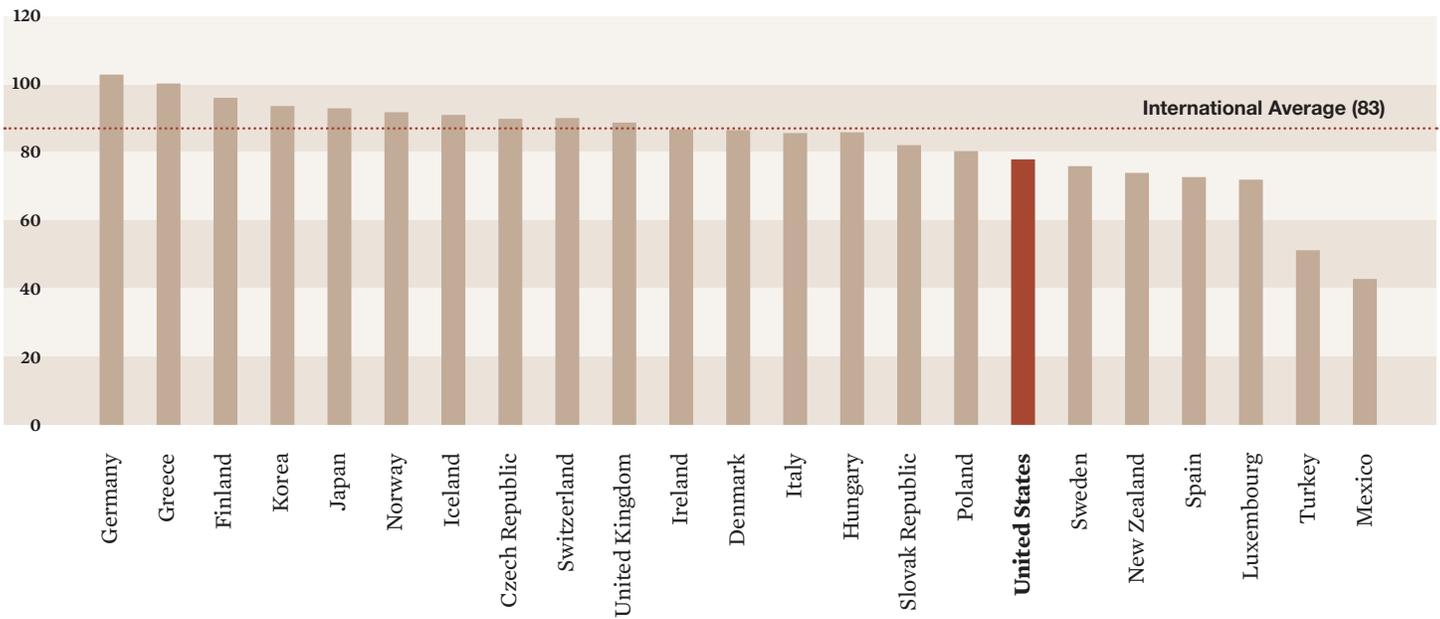
Source: OECD, *Education at a Glance* 2008, p. 43.

Table A-1. Differential between Graduation Rates Reported under No Child Left Behind (NCLB) and the NCES AFGR							
	AFGR-2005-06	2006 STATE REPORTED DATA	DIFFERENCE		AFGR-2005-06	2006 STATE REPORTED DATA	DIFFERENCE
Mississippi	64	87	24	Maryland	80	85	6
New Mexico	67	87	20	Wyoming	76	82	6
Alabama	66	82	15	Louisiana	60	65	5
California	69	83	14	Missouri	81	86	5
Michigan	72	86	14	Pennsylvania	83.5*	88	5
South Carolina	61*	74	13	Florida	64	68	5
Kansas	78	90	13	Minnesota	86	91	5
Nevada	56	68	12	Virginia	75	79	5
Connecticut	81	92	11	Utah	79	83	4
Tennessee	71	81	10	Iowa	87	91	4
Georgia	62	72	10	North Dakota	82	86	4
New York	67	77	10	Hawaii	76	79	4
Oregon	73	82	9	Indiana	73	77	3
South Dakota	85	93	9	Vermont	82	85	3
Illinois	80	88	8	Arkansas	80	83	3
Texas	73	80	8	Montana	82	84	2
Delaware	76	84	8	Wisconsin	88	89	2
West Virginia	77	85	8	Nebraska	87	88	1
Idaho	81	88	8	District of Columbia	65.4*	66	1
New Jersey	85	92	8	Massachusetts	80	80	0
Rhode Island	78	85	7	Arizona	71	70	(1)
Ohio	79	86	7	Colorado	76	74	(1)
Maine	76	83	7	North Carolina	72	70	(2)
Oklahoma	78	85	7	Washington	73	70	(3)
New Hampshire	81	88	7	Alaska	67	60	(7)
Kentucky	77	83	6				

* NCES Estimation

Source: National Center for Education Statistics (NCES), *Digest of Education Statistics* 2008, Table 106. Averaged Freshman Graduation Rates (AFGRs) for public secondary schools, by state or jurisdiction. Selected years are 1990–1991 and 2005–2006.State-reported data retrieved from each state's Consolidated State Performance Reports (CSPRs) available athttp://www.ed.gov/admins/lead/account/consolidated/sy05-06/index.html

Table A-2. Comparison of Federal Requirements for the Measurement of Graduation Rates	
	REQUIREMENTS FOR DEFINITION OF GRADUATION RATE
NCLB/ ESEA Statute 20 U.S.C. 6311	• "The percentage of students who graduate from secondary school with a regular diploma in the standard number of years."
NCLB—Conference report notes (not legally binding)	• "The conferees intend that reporting of graduation rates...shall be determined by reporting the percentage of students who graduate from high school with a regular high school diploma (not an alternative degree that may not be fully aligned with State academic standards, such as a certificate or GED), on time (within four years of starting the ninth grade....). The approach used to calculate graduation rates must also avoid counting dropouts as transfers. States that have or could have a more accurate longitudinal system that follows individual student progress through high school may use that system if approved by the Secretary..."[1]
2002 Title I Regulations (§200.19(a)(1))	• "The percentage of students, measured from the beginning of high school, who graduate from high school with a regular diploma (not including an alternative degree that is not fully aligned with the State's academic standards, such as a certificate or a GED) in the standards number of years..." *or* • "Another definition, developed by the State and approved by the Secretary [of Education] in the State plan, that more accurately measures the rate of students who graduate from high school with a regular diploma." • "In defining graduation rate, the state must avoid counting a dropout as a transfer."
2008 Title I Regulations (§200.19(b))	• State must calculate a four year adjusted cohort rate defined as the number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for the graduating class. • The term "adjusted cohort" means the students who enter grade 9 (or the earliest high school grade) and any students who transfer into the cohort in grades 9-12 minus any students removed from the cohort. • Official documentation is required to confirm that a student has transferred out, emigrated to another country, or is deceased. • A student who is retained in grade, enrolls in a GED program, or leaves school for any other reason may not be counted as having transferred out for the purpose of calculating the graduation rate and must remain in the cohort. • Students must receive a regular diploma in four (or less) years to be counted as a graduate in the four-year rate. • States may calculate an extended-year rate for students who graduate in five or more years, but those students still count against the four-year rate.
NGA Compact Rate	• Students graduating within four years with a diploma divided by the number of first-time students entering 9th grade four years earlier. • Students with disabilities or limited English proficiency can take longer to graduate without counting against a school's four -year rate. • Modified diplomas can be included in the compact rate.

1   "Conference Report to Accompany HR1, No Child Left Behind Act of 2001." U.S. House of Representatives Report 107-334 (December 13, 2001) : 700

Appendix B: Glossary

ACS—American Community Survey. A nationwide survey that is part of the Census Bureau's reengineered decennial census program. The ACS collects and produces population and housing information every year instead of every ten years.

ACGR—Adjusted Cohort Graduation Rate. Graduation indicator based on individual student data from state longitudinal data systems.

AFGR—Averaged Freshman Graduation Rate. Graduation rate published by the National Center for Education Statistics (NCES).

CCD—Common Core of Data. A program of the U.S. Department of Education's NCES that collects fiscal and non-fiscal data about all public schools, public school districts, and state education agencies in the United States each year. Data are collected through annual surveys of basic demographic and educational information at the state, district, and school levels as reported by state agency staff.

CPI—Cumulative Promotion Index. Graduation rate developed by Christopher Swanson and used by *Education Week*.

CPS—Current Population Survey. A monthly household survey conducted by the Bureau of the Census for the Bureau of Labor Statistics to provide information about employment, unemployment, and other characteristics of the civilian non-institutionalized population.

DQC—Data Quality Campaign. A national effort to encourage and support state policy makers to improve the availability and use of high-quality education data to improve student achievement. The group provides tools and resources to help states implement and use longitudinal data systems.

GED—General Educational Development. The process of earning the equivalent of a high school diploma, which is called a GED certificate or credential. It requires attending classes, studying, and passing a five-part test. Initiated by the United States Armed Forces Institute (USAFI) in 1942, the original tests were administered only to military personnel so that returning World War II veterans could more easily pursue their educational, vocational, and personal goals.

IES—Institute of Education Sciences. The independent research and evaluation office that is part of the U.S. Department of Education.

NCES—National Center for Education Statistics. The primary federal entity for collecting and analyzing data related to education. NCES is part of the U.S. Department of Education and the Institute of Education Sciences.

NCLB—No Child Left Behind Act. Name of the most recent reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA). Signed into law in early 2002. The act sought to improve primary and secondary public schools across the United States based on the principles of stronger accountability for results, more freedom for states and communities, proven education methods, and more choices for parents.

NGA—National Governors Association. An organization made up of the governors of the 50 states. The NGA seeks to be a connecting body between state and federal governments as well as allowing governors to share ideas for successful leadership with each other.

NISS—National Institute for Statistical Sciences. Established in 1991 by the National Statistics Societies and the Research Triangle universities and organizations. The mission of NISS is to identify, catalyze, and foster high-impact, cross-disciplinary research involving the statistical sciences.

Title I of ESEA. The largest federal education program designed to target aid to disadvantaged students. Title I grants to local education agencies provide supplemental education funding, especially in high-poverty areas, for locally designed programs that offer extra academic support to help raise the achievement of students at risk of educational failure or, in the case of school-wide programs, to help all students in high-poverty schools meet challenging state academic standards. This program serves more than 20 million students in nearly all school districts and more than 54,000 public schools—including two-thirds of the nation's elementary schools. Federal accountability and assessment requirements are included in Title I.

WWC—What Works Clearinghouse. An arm of the Institute of Education Sciences (IES) that is designed to provide educators with scientific evidence of what works and what doesn't in education.