# MIND THE (OTHER) GAP!

## The Growing Excellence Gap in K-12 Education

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February 4, 2010

Center for Evaluation & Education Policy

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**ACKNOWLEDGMENTS**

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## SECTION I: INTRODUCTION

One of the major objectives of the No Child Left Behind Act (NCLB) is to narrow the achievement gap among demographic subgroups of K-12 students. In NCLB's implementation, the principal focus has been on minimum competency—of bringing a larger proportion of students to a basic level of educational achievement and closing achievement gaps. Since NCLB's enactment, there has been progress towards these goals, as the achievement gaps among different demographic groups have shrunk at the basic and proficient levels of educational attainment according to national and state assessments.

Indeed, the recent progress appears to be part of a longer-term trend: the National Assessment of Educational Progress' Long-term Trend Assessment, which has tracked student reading and math achievement since the early 1970s, provides evidence that achievement gaps among racial groups have slowly and steadily declined over the past three and a half decades (Rampey, Dion, & Donahue, 2009). A great deal of progress is still needed, but the available data suggest that significant, meaningful progress has been made in our battle to reduce minimum competency achievement gaps.

However, some observers believe the focus on minimum competency has come at a price. Although there has been a general improvement in academic performance, are achievement gaps also shrinking at the highest levels of student achievement? The purpose of this report is to review national and state assessment data for the existence of "excellence gaps," differences between subgroups of students performing at the highest levels of achievement.

That excellence gaps have received so little attention over the past decade is a major oversight. The existence of such gaps raises doubts about the success of federal and state governments in providing greater and more equitable educational opportunities, particularly as the proportion of minority and low-income students continues to rise. The goal of guaranteeing that all children will have the opportunity to reach their academic potential is called into question if educational policies only assist some students while others are left behind. Furthermore, the comparatively small percentage of students scoring at the highest level on achievement tests suggests that children with advanced academic potential are being under-served, with potentially serious consequences for the long-term economic competitiveness of the U.S.

Yet in our discussions with both policymakers and policy researchers, it is obvious that excellence gaps are on few people's radar screens, in part because the necessary data are not readily available or easily accessible, and in part because excellence is rarely a focus of education policy discussions. This report is intended to provide some preliminary excellence gap data and kick start the national discussion on the importance of excellence in our national and state K-12 education systems.

## Format of the Report

After briefly summarizing recent literature on the excellence gap, the trends in National Assessment of Educational Progress (NAEP) scores along gender, racial, income, and English language lines are discussed, with a brief examination of excellence gaps as measured by state accountability assessments. Next, the degree to which achievement gaps at the advanced level may be connected to gaps at the basic and proficient level of achievement is considered. After a discussion of state and federal policies targeting high-ability students, an empirical analysis of the potential factors influencing the size and trend of excellence gaps is presented. Finally, conclusions as well as policy recommendations are offered.

## Literature Review

Only a limited amount of research has been conducted on achievement gaps among students who perform at advanced levels, but the existing research provides evidence that the educational system systematically shortchanges certain populations of students capable of reaching high levels of academic performance. Much of this research focuses on the gaps among White and Black students; similar gaps involving Hispanic, free lunch-eligible, and English Language Learning students are largely ignored.

Reardon (2008) examined the Black-White academic gaps among initially high- and low-achieving students. In a longitudinal study, he found that even though both Black and White students initially had the same reading and math skills when entering kindergarten, Black students tended to fall well behind their White peers in later grades. In addition, the Black-White gaps grew faster among students who were initially above the mean of reading and math skills than those below the mean. Reardon suggests that Black high-achievers may be attending schools with less challenging learning experiences and fewer resources.

In a similar study of the Black-White achievement gap, Hanushek and Rivkin (2006), using both the Texas Schools Project panel data and the Early Childhood Longitudinal Survey, found that prior to Grade 5, there was no significant relationship between initial achievement and the achievement gap. However, following Grade 5, the gap between students with higher initial achievement increased quickly while the gap between those with lower initial achievement either increased marginally or even shrank. Teacher experience, the proportion of Black students, and school policies also contributed to the achievement gaps.

Clotfelter, Ladd, and Vigdor (2006) examined the achievement gaps between different demographic groups by using data for consecutive cohorts of North Carolina public school students in Grades 3 to 8. They found that the achievement gap between low achievers shrank in most cases, while the gap between high achievers tended to increase between Grades 3 and 8. In further examination, they found only a few districts that succeeded in raising underrepresented minority groups' test scores and closing achievement gaps. They also suggested further research to study if the divergent trends were related to the accountability system, such as NCLB, which is aimed at raising the achievement of low- and under-performing students.

There is some limited evidence that NCLB's focus on minimum competency has played a role in the growing excellence gap. In an analysis of NAEP data before and after NCLB was enacted, Loveless (2008) found that since 2000, low-achieving students have made solid progress, while the progress of high-achieving students has been modest. According to Farkas and Duffett (2008), the federal accountability system has resulted in schools and teachers placing greater emphasis on low-achieving students than on high-achievers, as "a full 40 percent of teachers say that the content and curriculum of honors and accelerated classes is 'too often watered down and lacking rigor.'" Similarly, Neal and Schanzenbach (2007) provide evidence that standards-based accountability reforms, in the case of the Chicago Public Schools, have a mixed effect on the achievement of high-achieving students. They suspect that such accountability systems tend to focus educator attention on students who are working just below the proficiency standards. Although none of these studies conclusively demonstrates that the emphasis on minimum competency causes increasing or stagnant excellence gaps, the research is certainly suggestive.

In contrast, recent research by the Center on Education Policy (CEP) suggests that there is no trade-off between advanced students and their peers, as the proportion of students achieving basic, proficient, and advanced levels of achievement has increased since 2002, with 71% of states registering a greater percentage scoring at the highest levels (Chudowsky, Chudowsky, & Kober, 2009a). A follow-up study (Chudowsky et al., 2009b) performed a limited analysis of trends *within* subgroups at the advanced level and found general improvement in performance, but this focused only on Grade 4 state assessments and did not make comparisons *across* subgroups. CEP's previous work (Kober, Chudowsky, & Chudowsky, 2008) suggests that achievement gaps at the proficient level have improved on the majority of indicators on state assessments (80%) and the NAEP (62%). However, none of these studies directly addresses excellence gaps.

## SECTION II: EXCELLENCE GAPS DATA WITH NAEP DATA

### Summary

- **There are multiple ways to measure excellence gaps. Regardless of the method used, the evidence strongly suggests that excellence gaps on most NAEP tests are growing at both Grade 4 and Grade 8.**
- **When NAEP results are examined on a state-by-state basis, the results are inconsistent but generally show, at best, mixed evidence of progress.**
- **Very few excellence gaps are shrinking, and of those that are, some are due to decreasing performance among top-achieving subgroups.**

### NAEP Achievement Levels: National Data

National data on student performance are available from the NAEP, which assesses American students' performance in Grades 4, 8, and 12 in a wide range of subject areas. Established in 1969, the NAEP tests a representative sample of K-12 students in all 50 states.[1] Test results are available through the National Center for Education Statistics, the primary federal entity for collecting and analyzing data related to education. NAEP divides student performance into four basic categories: below basic, basic, proficient, and advanced. Table 1 excerpts the criteria established by the NAEP governing board for the advanced level using language drawn directly from the NAEP website.[2]

The data presented in the following figures are analyzed by demographic groups, including race, socio-economic status, English language proficiency, and gender. The purple line indicates the passage of NCLB. As the 2009 NAEP Reading have not yet been released, the following analysis is limited to data collected through 2007. Please note that in earlier years NAEP conducted reading and math tests in different years. Data representing only 2003 to 2007 results (i.e., soon after NCLB's passage vs. five years later) is included in the Appendix.

NAEP results suggest that the excellence achievement gaps among different racial groups, high- and low-socio-economic status, different levels of English language proficiency, and gender groups have widened in the era of NCLB. The percentage of White, more affluent, and English-language speakers scoring at the advanced level has increased substantially in math while the performance of other groups has remained relatively stable. There has been little change in the percentage of students performing at the advanced level in reading, with particularly low performance across all subgroups in Grade 8. Excellence gaps in math are generally greater in Grade 8 than in Grade 4, while the reverse holds true in reading (perhaps due to such a small percentage of students scoring at the advanced level in Grade 8).[3]

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[1] NAEP includes both public and private students in the national results, but only public students for state-level results.

[2] For mathematics, see http://nces.ed.gov/nationsreportcard/mathematics/achieveall.asp. For reading, see http://nces.ed.gov/nationsreportcard/reading/achieveall.asp.

[3] All gaps are statistically significant, except for ELL Reading Grade 8 (due to a limited 2003 sample). Gap trends in Math are statistically significant for ethnic, income, and English language-based gaps.

**Table 1. NAEP Standards for Basic, Proficient, and Advanced Status**

| Subtest and Grade | Basic | Proficient | Advanced |
|---|---|---|---|
| Math Grade 4 (2009) | Show some evidence of understanding the mathematical concepts and procedures in the five NAEP content areas. | Consistently apply integrated procedural knowledge and conceptual understanding to problem solving in the five NAEP content areas. | Apply integrated procedural knowledge and conceptual understanding to complex and nonroutine real-world problem solving in the five NAEP content areas. |
| Math Grade 8 (2009) | Exhibit evidence of conceptual and procedural understanding in the five NAEP content areas; signifies an understanding of arithmetic operations—including estimation—on whole numbers, decimals, fractions, and percents. | Apply mathematical concepts and procedures consistently to complex problems in the five NAEP content areas. | Able to reach beyond the recognition, identification, and application of mathematical rules in order to generalize and synthesize concepts and principles in the five NAEP content areas. |
| Reading Grade 4 (2007) | Demonstrate an understanding of the overall meaning of what they read and be able to make relatively obvious connections between the text and their own experiences and extend the ideas in the text by making simple inferences. | Able to demonstrate an overall understanding of the text, providing inferential as well as literal information; able to extend the ideas in the text by making inferences, drawing conclusions, and making connections to their own experiences. | Able to generalize about topics in the reading selection and demonstrate an awareness of how authors compose and use literary devices; able to judge text critically and, in general, to give thorough answers that indicate careful thought. |
| Reading Grade 8 (2007) | Demonstrate a literal understanding of what they read and be able to make some interpretations; able to identify specific aspects of the text that reflect overall meaning, extend the ideas in the text by making simple inferences, recognize and relate interpretations and connections among ideas in the text to personal experience, and draw conclusions based on the text. | Able to show an overall understanding of the text, including inferential as well as literal information; able to extend the ideas in the text by making clear inferences from it, by drawing conclusions, and by making connections to their own experiences—including other reading experiences; able to identify some of the devices authors use in composing text. | Able to describe the more abstract themes and ideas of the overall text; able to analyze both meaning and form and support their analyses explicitly with examples from the text; able to extend text information by relating it to their experiences and to world events. |

**Figure 1**

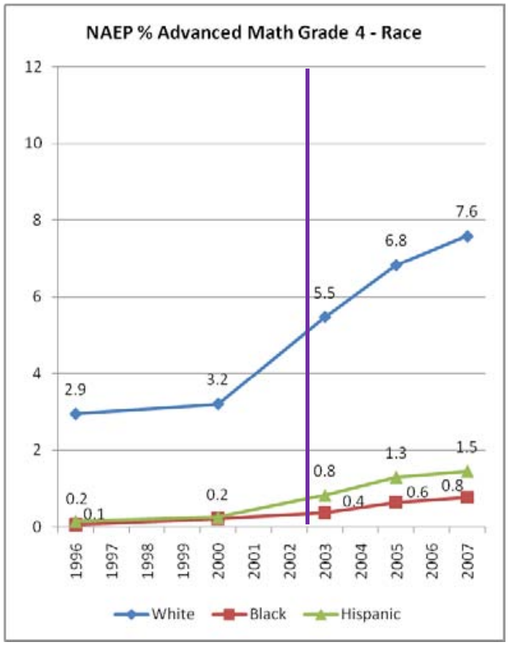



**Figure 2**

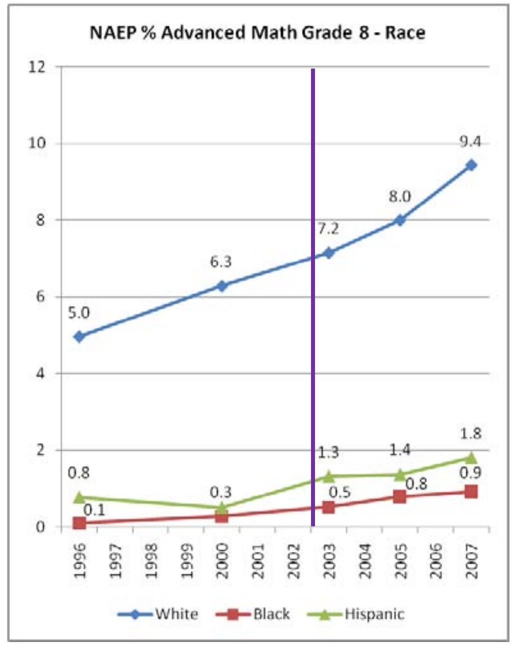



**Figure 3**

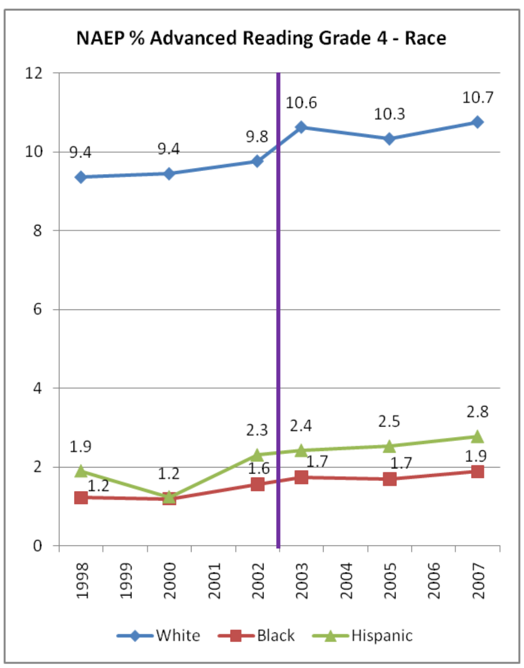
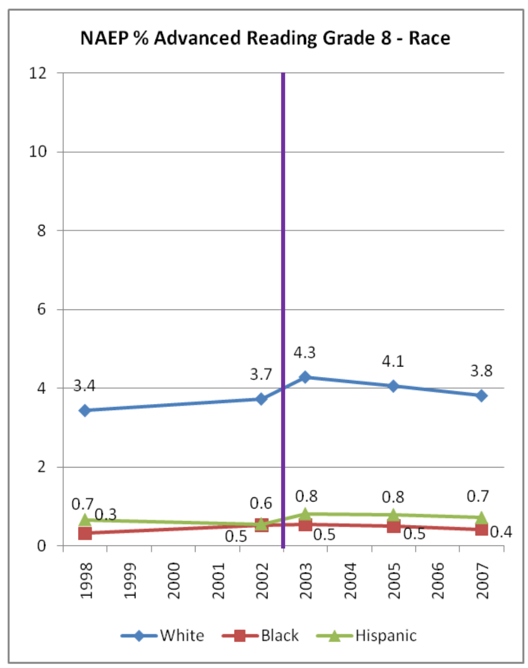



**Figure 4**



**Race**[4] [5]

- In Grade 4 mathematics (see Figure 1), from 1996 to 2007, the percentage of White students scoring at the advanced level increased by 4.6 percentage points from 2.9% to 7.6%, while the percentages of Black and Hispanic students increased by only .7% and 1.3%, respectively. Similarly in Grade 8 mathematics (see Figure 2), from 1996 to 2007, the percentage of White students scoring at the advanced level increased by 4.5 percentage points, while the percentage of Black and Hispanic students increased by .8 and 1 percentage points.[6]
- Since the percentage of White students scoring at the advanced level increased much faster than those of Black and Hispanic students, the excellence gaps widened in mathematics. At both grade levels, there was an increase in the excellence gap between White students and Black students (to 6.8% in Grade 4 and 8.5% in Grade 8) and between White students and Hispanic students (to 6.1% in Grade 4 and 7.6% in Grade 8).
- In Grade 4 reading (see Figure 3), from 1998 to 2007, the percentage of White students scoring at the advanced level increased by 1.4 percentage points to 10.7%, while the percentages of Black and Hispanic students scoring advanced in 2007 increased by .7% and .5%, respectively. In Grade 8 reading (see Figure 4), from 1998 to 2007, the percentage of White students scoring at the advanced level increased by .4 points, while the percentages of Black and Hispanic students increased by .1 point.
- Since the percentage of White students scoring at the advanced level increased slightly while those of Black and Hispanic students were essentially stagnant, the excellence gaps among different racial groups changed little, to 8.9% for Black students in Grade 4 and 3.4% in Grade 8, and to 8% for Hispanic students in Grade 4 and 3.1% in Grade 8.

[4] This report follows NAEP precedents in describing student ethnicity.

[5] Numbers measuring change may be slightly different in the text than in the figures due to rounding

[6] One reviewer cautioned on the use of percentages in this study. For example, from 1996-1998, the percentage of Black students scoring at the advanced level increased from 0.1% to 0.8%. White students scoring at this level increased from 2.9% to 7.6%. Technically, Black student performance increased substantially faster than White student performance: An increase of 700% vs. 162%! Yet from our perspective, the percent increase statistics distract from the real issues: White student performance at the advanced level clearly increased at a more impressive scale than Black student performance. For this reason, we focus on the raw increase in percent advanced rates.

**Figure 5**

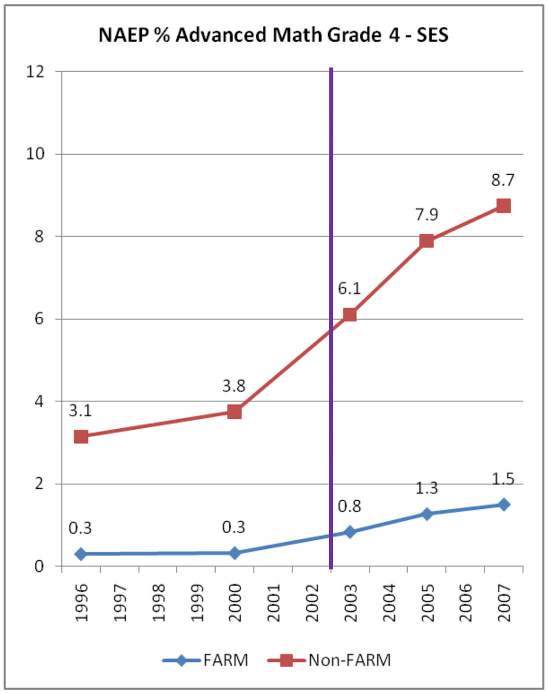



**Figure 6**

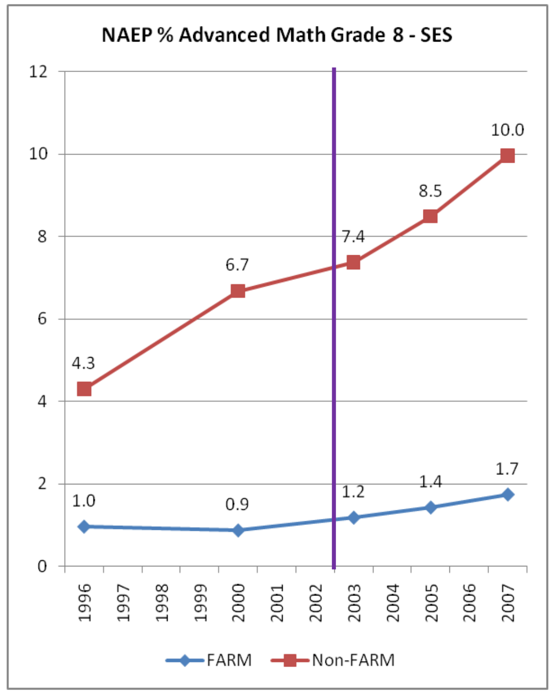



**Figure 7**

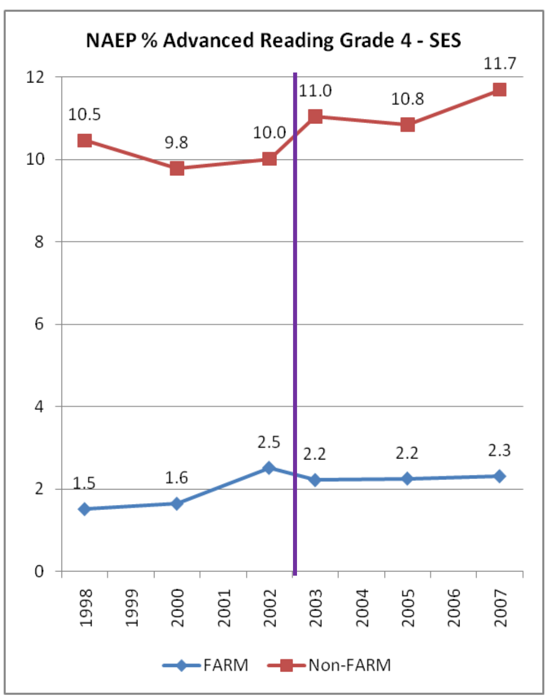
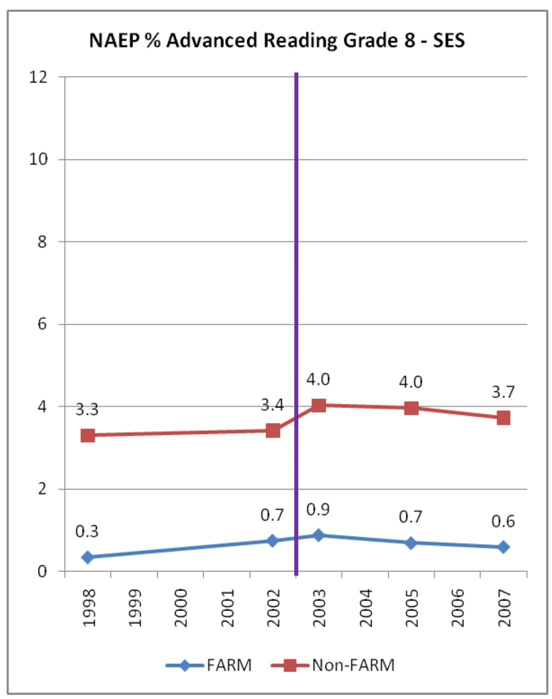



**Figure 8**



**Socio-Economic Status**

- In Grade 4 mathematics (see Figure 5), from 1996 to 2007, the percentage of students scoring at the advanced level who are not eligible for the National School Lunch Program increased by 5.6 percentage points to 8.8%, while the percentage of students who are eligible for free or reduced-priced lunch (FARM) increased by only 1.2 percentage points to 1.5%. Similarly in Grade 8 mathematics (see Figure 6), from 1996 to 2007, the percentage of students scoring at the advanced level who are not eligible for the National School Lunch Program increased by 5.7 percentage points, while the percentage of students who are eligible for free or reduced-priced lunch increased by .8 percentage points.
- Since the percentage of Grade 8 students who are not eligible for the program has increased faster than that of students who are, the excellence achievement gaps have widened in mathematics by 4.1 percentage points in Grade 4 (to 7.3%) and 4.9 in Grade 8 (to 8.2%).
- In Grade 4 reading (see Figure 7), from 1998 to 2007, the percentage of students scoring at the advanced level who are not eligible for the National School Lunch Program increased by 1.2 percentage points, from 10.5% to 11.7%, while the percentage of students who are eligible for free or reduced-priced lunch scoring at the advanced level increased by .8 percentage points, to 2.3 percent. In Grade 8 reading (see Figure 8), from 1998 to 2007, performance was essentially unchanged, with the percentage of FARM students increased by .3 points to .6% and for non-FARM students by .4% to 3.7%.
- In Grade 4 reading, since the percentage of students scoring at the advanced level who are not eligible for the program increased faster than those students who are eligible for free or reduced-priced lunch who scored at the advanced level, the excellence gaps between different socio-economic groups widened slightly (.4) in reading to 9.4%. However, in Grade 8 reading, the excellence gaps have not changed appreciatively over the years of analysis, increasing by .2 points to 3.1%.

**Figure 9**

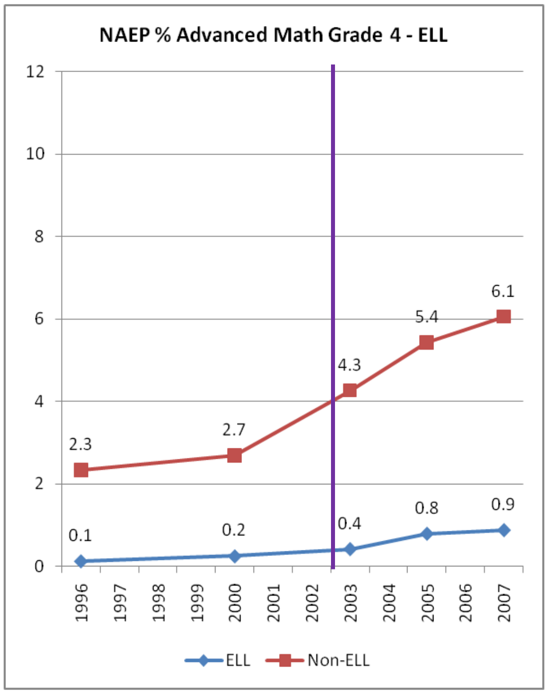



**Figure 10**

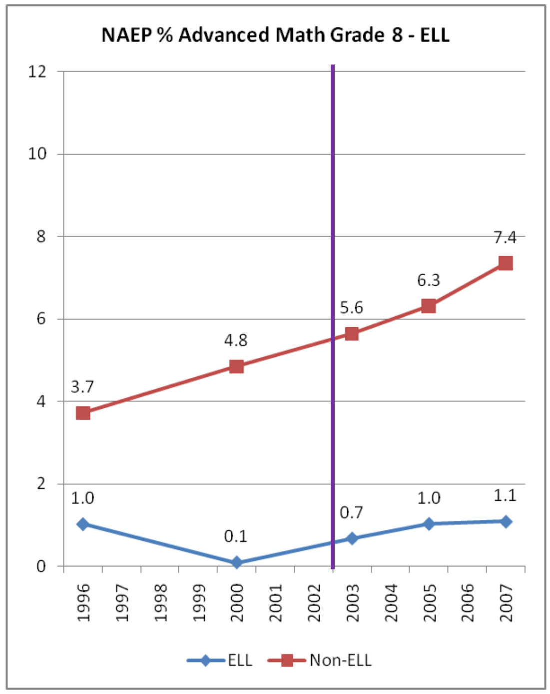



**Figure 11**

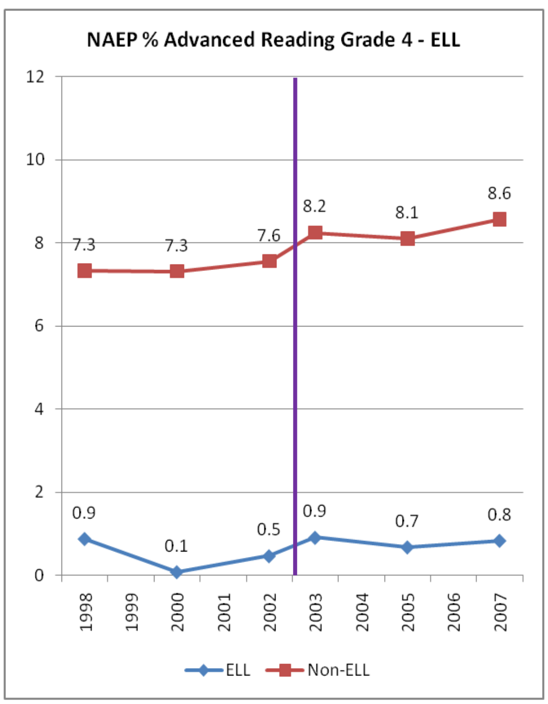
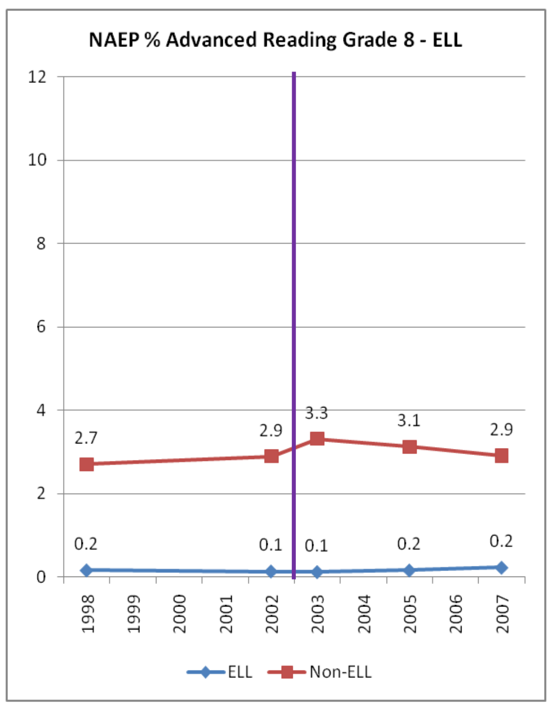



**Figure 12**



## English Language Proficiency

- Data for English Language Learners (ELL) should be treated with caution, particularly in earlier years, due to the failure of many states to report data that meet NAEP reporting requirements. In Grade 4 mathematics (see Figure 9), from 1996 to 2007, the percentage of non-English Language Learners students scoring at the advanced level increased by 3.7 percentage points, and the percentage of ELL students increased by.8 points. In Grade 8 mathematics (see Figure 10), from 1996 to 2007, the percentage of non-ELL students scoring at the advanced level increased by 3.6 percentage points, and the percentage of ELL students scoring at this level increased by only .1 points. The excellence gaps in Grades 4 and 8 widened between 1998 and 2007, to 5.2% in Grade 4 and 6.3% in Grade 8.
- In Grade 4 reading (see Figure 11), from 1998 to 2007, the percentage of non-English Language Learners (ELL) students scoring at the advanced level increased by 8.6 percentage points, from 6.4 to 7.7 percent, while the share of ELL students scoring at advanced level declined slightly (from .9% to .8%). In Grade 8 reading (see Figure 12), from 2003 to 2007, the percentage of both non-ELL students and ELL students scoring at the advanced level did not increase substantially. The excellence gap in Grade 4 widened by 1.3 percentage point to 7.7% and the gap in Grade 8 was essentially unchanged, increasing by .1 to 2.7%.

**Figure 13**

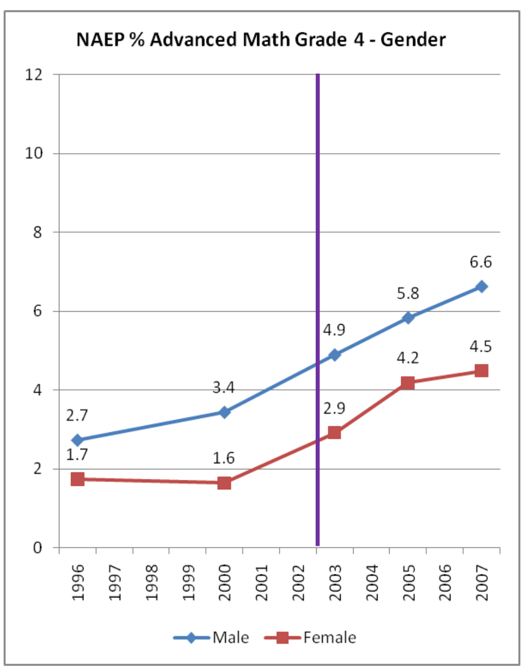



**Figure 14**

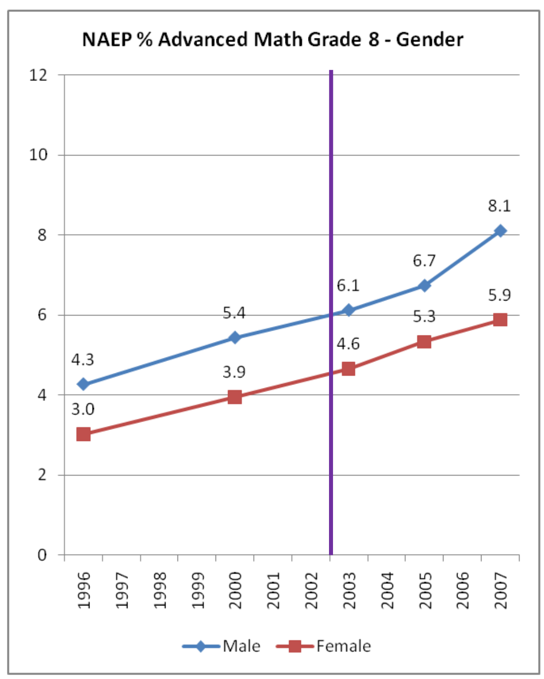


**Figure 15**

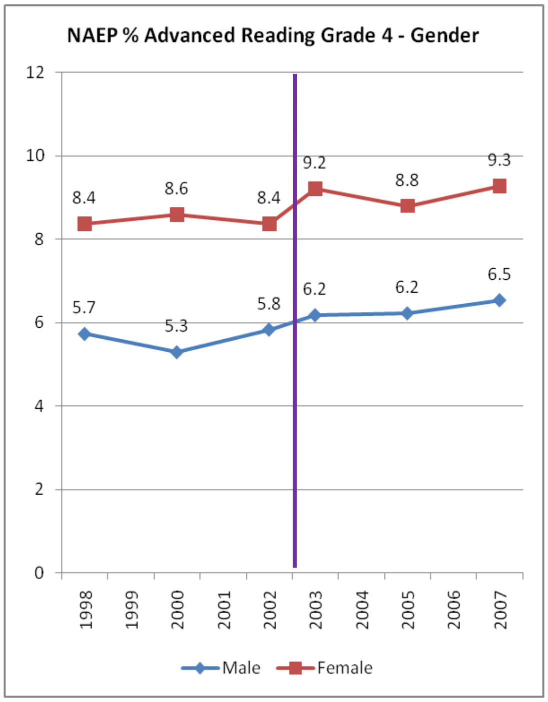
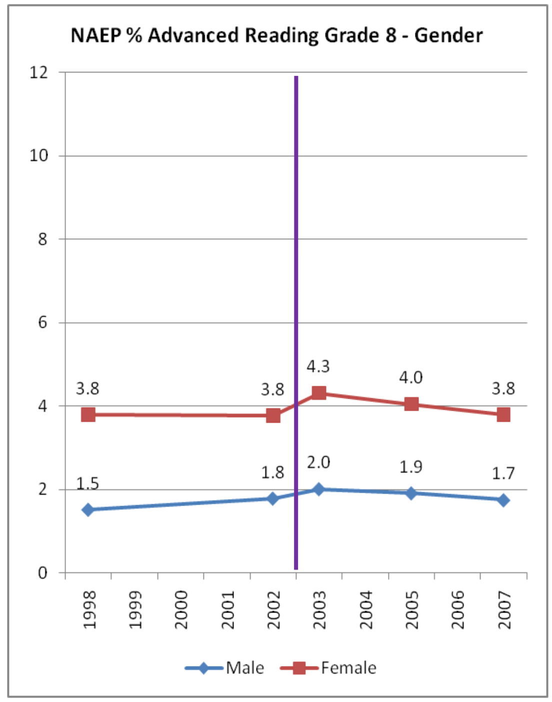



**Figure 16**




## Gender

- In Grade 4 mathematics (Figure 13), from 1996-2007, the percentage of male students scoring at the advanced level increased by 3.9 percentage points to 6.6%, female students increased by 2.7 percentage points to 4.5%. In Grade 8 mathematics (Figure 14), from 1996 to 2007, the percentage of male students scoring at the advanced level increased by 3.8 percentage points to 8.1% and that of female students increased by 2.9 percentage points to 5.9%. The percentage of male students has consistently remained higher than that of female students on mathematics tests at both grade levels. Since the percentage of male students scoring at the advanced level has increased faster than that of female students, the excellence gaps between different gender groups have grown by 1.1 percentage points in Grade 4 (to 2.1%) and 1 point in Grade 8 (to 2.2%).
- In Grade 4 reading (see Figure 15), from 1998 to 2007, the percentage of both female and male students scoring at the advanced level increased by approximately 1 percentage point (.8 for males, .9 for females), with the percentage of female students remaining higher than that of male students (2.7%). In Grade 8 reading (see Figure 16), from 1998 to 2007, the percentage of both female and male students scoring at the advanced level did not change appreciably (.2 for males, no change for females), and the percentage of female students has consistently remained roughly 2 percentage points higher than that of male students (2.3% in 1998, 2% in 2007). The excellence gap between different gender groups in Grade 4 and 8 reading has not changed noticeably over the years,

increasing by .1 points from 2.6% to 2.7% in Grade 4 and declining by .2 points from 2.3% to 2% in Grade 8.

**NAEP ACHIEVEMENT LEVELS: STATE DATA**

An analysis of trends in NAEP scores at the state level paints a similar picture. As depicted in Table 2, the excellence gap has expanded rather than narrowed in most states. The distinction between math and reading scores is particularly striking. The trend in the size of excellence gaps on NAEP reading scores appears more positive, with a majority of states registering smaller excellence gaps for males, ELL, and Hispanic students for all reading tests, as well as Black and school-lunch eligible students on Reading 8 tests. The trends for math scores are disturbing, however, with only a handful of states posting smaller excellence gaps for school-lunch, ELL, and ethnic minority students. State-level results suggest a double dilemma: Math scores are generally increasing, but a disproportionate number of those gains are in subgroups that are already over-represented; by contrast, achievement gaps in Reading are being reduced in the context of anemic academic performance. Furthermore, there is no consistent pattern of narrower excellence gaps for states, with no states demonstrating smaller gaps for every subgroup and every exam. As a consequence, there is no clear model to be identified for narrowing gaps for all students: every state faces an enormous challenge in enhancing educational performance for underrepresented groups.

These NAEP data suggest that few states are successfully reducing excellence gaps while improving academic performance across subgroups on any exam. States are having the most success in reducing gender gaps while seeing broad-based increases in the proportion of students scoring at the advanced level, but in every case the states doing so are in a pronounced minority (Table 2). Table 3 presents those states that are experiencing smaller gaps while also improving the percentage of students scoring at the advanced level. Although no state is both reducing the gaps and improving performance in all areas, Illinois managed to do so in seven categories and Delaware, Iowa, and Nebraska in five. A few states are moving in the right direction with respect to minority achievement gaps: Illinois and Pennsylvania for Hispanic students in Math, Delaware and New Jersey for Hispanic students in Reading, Iowa for Black students in Math, and Delaware for Black students in Reading.[7] The lack of consistent results in Table 3 for any one state suggest that such success may be related to factors divorced from state education policy initiatives (or possibly even demographic differences), that state policies are implemented inconsistently, or that specific policies have differential effects. According to NAEP proficiency data, over-represented groups continue to represent a disproportionate number of high-performing students.[8]

[7] IL (for Hispanic students in Math) and NJ (for Hispanic students in Reading) had particularly large gaps.

[8] In the fall of 2009 the NCES released the results of the 2009 NAEP in Math. The results were broadly consistent with previous trends. The percentage of students scoring at the advanced level increased in Grade 4 for non-FARM and female students and in Grade 8 for non-ELL, non-FARM, and White students as well as for both genders. Stagnating performance resulted in an expanded excellence gap in Grade 4 for FARM students and in Grade 8 for ELL, FARM, Black, and Hispanic students. For the period 2003-2009, the size of the gap has steadily grown for disadvantaged students across categories and in both grades. State- level analyses suggest that the previous trends are continuing, although more states are having success in improving Black and Hispanic performance. Excellence gaps increased in nearly all states except for the case of gender.

**Table 2: State Trends in Students Scoring "Advanced" and Excellence Gaps on NAEP, 03-07.**

| Subject, Grade, Group | Students Performing at Advanced Level | | | Excellence Gaps | |
|---|---|---|---|---|---|
| | States Showing Improvement | States Showing Declines | States with No Change | States with Worsening Gaps | States with Improving Gaps |
| Math 4 Male | 50 | 0 | | 33 | 17 |
| Math 4 Female | 46 | 4 | | | |
| Math 8 Male | 47 | 3 | | 39 | 11 |
| Math 8 Female | 49 | 1 | | | |
| Reading 4 Male | 32 | 18 | | 21 | 29 |
| Reading 4 Female | 28 | 22 | | | |
| Reading 8 Male | 16 | 34 | | 13 | 37 |
| Reading 8 Female | 9 | 41 | | | |
| Math 4 ELL | 22 | 9 | 7 | 38 | 0 |
| Math 4 Non-ELL | 50 | 0 | | | |
| Math 8 ELL | 10 | 10 | 4 | 21 | 3 |
| Math 8 Non-ELL | 50 | 0 | | | |
| Reading 4 ELL | 19 | 13 | 3 | 18 | 17 |
| Reading 4 Non-ELL | 32 | 18 | | | |
| Reading 8 ELL | 1 | 2 | 17 | 6 | 14 |
| Reading 8 Non-ELL | 11 | 39 | | | |
| Math 4 FARM | 46 | 3 | 1 | 49 | 1 |
| Math 4 Non-FARM | 50 | 0 | | | |
| Math 8 FARM | 46 | 3 | 1 | 46 | 4 |
| Math 8 Non-FARM | 49 | 1 | | | |
| Reading 4 FARM | 27 | 23 | | 34 | 16 |
| Reading 4 Non-FARM | 36 | 14 | | | |
| Reading 8 FARM | 13 | 30 | 7 | 21 | 29 |
| Reading 8 Non-FARM | 16 | 34 | | | |
| Math 4 White | 48 | 2 | | WB: 37<br>WH: 36 | WB: 4<br>WH: 6 |
| Math 4 Black | 28 | 3 | 10 | | |
| Math 4 Hispanic | 32 | 9 | 1 | | |
| Math 8 White | 47 | 3 | | WB: 35<br>WH: 32 | WB: 5<br>WH: 4 |
| Math 8 Black | 25 | 6 | 9 | | |
| Math 8 Hispanic | 22 | 14 | | | |
| Reading 4 White | 32 | 18 | | WB: 22<br>WH: 29 | WB: 19<br>WH: 11 |
| Reading 4 Black | 25 | 16 | | | |
| Reading 4 Hispanic | 22 | 18 | | | |
| Reading 8 White | 14 | 36 | | WB: 14<br>WH: 11 | WB: 26<br>WH: 25 |
| Reading 8 Black | 10 | 10 | 20 | | |
| Reading 8 Hispanic | 14 | 16 | 6 | | |

*Note*. ELL: English language learners; FARM: Free and Reduced Meal eligible; WB: Gap between White and Black students; WH: Gap between White and Hispanic students; MF: Gap between male and female students; FM: Gap between female and male students. FM is used for Reading and MF for Math to reflect which subgroup posts greater performance.

**Table 3. States with Increasing Performance and a Declining Excellence Gap, 2003-07**

| Subtest and Grade | Subgroup | High-performing States |
|---|---|---|
| Reading 4 | FM | 12: WI, WA, NH, NY, KY, NV, MA, HA, IL, UT, AK, CO |
| | FARM | 4: ND, IL, MD, NJ |
| | WB | 6: NJ, IA, KS, MI, CO, DE |
| | WH | 4: IL, FL, HA, DE |
| | ELL | 10: MD, UT, WY, IA, NE, KS, AK, CA, NH, RI |
| Math 4 | MF | 17: NH, KS, TX, SC, HA, DE, RI, WY, AK, SD, GA, MS, CA, NM, LA, MT, IA |
| | FARM | 1: NC |
| | WB | 2: GA, RI |
| | WH | 5: IA, IL, PA, OR, MO |
| | ELL | 0 |
| Reading 8 | FM | 3: AZ, PA, NE |
| | FARM | 1: MN |
| | WB | 3: NE, DE, AZ |
| | WH | 6: DE, MD, CT, GA, NE, NJ |
| | ELL | 0 |
| Math 8 | MF | 8: SC, WY, ME, AK, FL, IL, NE, CA |
| | FARM | 3: NY, UT, HA |
| | WB | 2: IA, NV |
| | WH | 3: NC, PA, IL |
| | ELL | 3: IL, OH, FL |

*Note*. States are listed in order of the greatest decline (improvement) in the size of gaps, left to right.

## NAEP 90TH PERCENTILE SCORES: NATIONAL DATA

The conventional means of tracking changes in the size of achievement gaps relies on the use of proficiency level cut-points. This method has the advantage of being consistent with the requirements of NCLB and other state assessments, which require that students reach a given level of performance on examinations in order to meet adequate yearly progress. It also yields a relatively intuitive means of interpreting achievement gaps.

However, the proficiency level approach to analyzing gap trends has recently come under criticism. Ho (2008) has argued that such an approach can lead to misleading outcomes, with the selection of cut-points having a dramatic (and deceptive) effect on magnitude and direction of trends. Because student performance on exams tends to cluster around the mean, the selection of a cut-point closer to the mean will create the appearance of greater change over time than if the cut-point is placed at the extremes. Furthermore, when comparing the change in the gap between groups, trends can flip from positive to negative or vice versa solely because the cut-point has been placed closer to the mode of one of the two groups. These difficulties raise serious questions about the validity of using proficiency scores to measure change in the excellence gap.

Another method of measuring comparative performance is through the use of percentiles, which are not subject to the same statistical problems as proficiency levels. Assuming that the capacity of students is constant across subgroups, an equitable educational system should result in virtually identical achievement levels at a given percentile across groups. For example, ideally Black and White students at the 90$^{th}$ percentile on the NAEP should have roughly similar scores. The degree to which there is a gap points to educational inequities, and changes in the difference of these two scores over time gives an alternative formulation of the excellence gap. Although performance at the 90$^{th}$ percentile—the highest percentile publicly reported on the NAEP—does not measure precisely the same achievement as the advanced level of proficiency, it does give a rough indication of student achievement for the highest performing students in a given subgroup.

A replication of the earlier analyses using NAEP 90$^{th}$ percentile scores suggests that although a substantial excellence gap exists, the trends are somewhat more promising than when using proficiency proportions. There are large gaps (in the 20-30 point range) for English Language Learner, FARM, Black, and Hispanic students compared with their peers (Table 4). Between 2003 and 2007 there was a modest improvement in Math scores for all groups and in Reading Grade 4 for most groups (except White and ELL students), with a general decline in Reading scores on Grade 8 exams for all but Black and Hispanic students, whose scores stagnated.

With respect to excellence gaps, a surface impression might be that scores are headed in the right direction, with declines in the size of the excellence gap in Math Grade 4 (all subgroups), in Math Grade 8 and Reading Grade 4 for ELL and minorities, and Reading Grade 8 for Black and Hispanic students. However, the goal of NCLB is not just to shrink the size of the gap, but to do so within the context of overall student improvement. Each subgroup is expected to increase its performance with lagging groups closing the gap *by improving at a greater rate*. Smaller excellence gaps caused by declines in performance among leading groups do not represent educational progress and therefore should not be viewed as a success. The positive scenario holds on Math Grade 4 examinations, but for only some groups in Math Grade 8 and Reading Grade 4, and in no instances for Reading Grade 8 tests.

A recent report by the National Center for Education Statistics (NCES) indicates that since 1990 (and since 2003), achievement gaps on the NAEP between White and Black students have shrunk as measured by average scale scores. Scores for both groups have increased over time but Black students have reduced the gap by making greater gains. These results hold for both Reading and Math and in Grades 4 and 8 for group averages. An analysis of the achievement gap between Black and White students at the 90$^{th}$ percentile demonstrates similar results for Math, with Black students making up some ground on White students. *However, the small decline in the excellence gap in Reading was largely due to stagnation (Grade 4) or decline (Grade 8) among White students.*

**Table 4: Trends in NAEP Scale Scores and Gaps at the 90th Percentile, 2003-2007**[9]

| Subject, Grade, Group | 2003 Scale Score | 2007 Scale Score | Change in Scale Score | Excellence Gap 2003 | Excellence Gap 2007 | Change in Excellence Gap |
|---|---|---|---|---|---|---|
| Math 4 Male | 273 | 277 | +4 | 5 | 4 | -1 |
| Math 4 Female | 268 | 273 | +5 | | | |
| Reading 4 Male | 260 | 261 | +1 | 6 | 6 | 0 |
| Reading 4 Female | 266 | 267 | +1 | | | |
| Math 8 Male | 325 | 329 | +4 | 4 | 5 | +1 |
| Math 8 Female | 321 | 324 | +3 | | | |
| Reading 8 Male | 301 | 300 | -1 | 9 | 9 | 0 |
| Reading 8 Female | 310 | 309 | -1 | | | |
| Math 4 ELL | 248 | 253 | +5 | 24 | 23 | -1 |
| Math 4 Non-ELL | 272 | 276 | +4 | | | |
| Reading 4 ELL | 232 | 233 | +1 | 33 | 32 | -1 |
| Reading 4 Non-ELL | 265 | 265 | 0 | | | |
| Math 8 ELL | 284 | 292 | +8 | 39 | 36 | -3 |
| Math 8 Non-ELL | 323 | 328 | +5 | | | |
| Reading 8 ELL | 268 | 267 | -1 | 39 | 39 | 0 |
| Reading 8 Non-ELL | 307 | 306 | -1 | | | |
| Math 4 FARM | 255 | 261 | +6 | 21 | 19 | -2 |
| Math 4 Non FARM | 276 | 280 | +4 | | | |
| Reading 4 FARM | 246 | 247 | +1 | 24 | 24 | 0 |
| Reading 4 Non-FARM | 270 | 271 | +1 | | | |
| Math 8 FARM | 303 | 307 | +4 | 25 | 26 | +1 |
| Math 8 Non-FARM | 328 | 333 | +5 | | | |
| Reading 8 FARM | 290 | 288 | -2 | 20 | 21 | +1 |
| Reading 8 Non-FARM | 310 | 309 | -1 | | | |
| Math 4 White | 275 | 279 | +4 | WB 26<br>WH 19 | WB 23<br>WH 18 | WB -3<br>WH -1 |
| Math 4 Black | 249 | 256 | +7 | | | |
| Math 4 Hispanic | 256 | 261 | +5 | | | |
| Reading 4 White | 269 | 269 | 0 | WB 26<br>WB 23 | WB 25<br>WH 20 | WB -1<br>WH -3 |
| Reading 4 Black | 243 | 244 | +1 | | | |
| Reading 4 Hispanic | 246 | 249 | +3 | | | |
| Math 8 White | 328 | 332 | +4 | WB 34<br>WH 26 | WB 31<br>WH 25 | WB -3<br>WH -1 |
| Math 8 Black | 294 | 301 | +7 | | | |
| Math 8 Hispanic | 302 | 307 | +5 | | | |
| Reading 8 White | 311 | 310 | -1 | WB 26<br>WH 22 | WB 25<br>WH 21 | WB -1<br>WH -1 |
| Reading 8 Black | 285 | 285 | 0 | | | |
| Reading 8 Hispanic | 289 | 289 | 0 | | | |

*Note*. Green-shaded boxes represent decreasing (improving) excellence gaps; yellow represents no change; red represents increasing (worsening) gaps.

[9] All gaps are statistically significant. Gap trends are statistically significant for Black students in Math Grade (both grades) and for FARM students in Math Grade 4.

Aside from the direction of the change, the magnitude of improvements is far more troubling. The narrowing of the excellence gap was only statistically significant for FARM students in Math Grade 4 and Black students in both grades of Math. Of the 13 (out of 20) percentile excellence gaps that declined between 2003 and 2007, the rate of improvement was small, between .25 and .75 points a year when gaps averaged approximately 22 points on NAEP exams. At the present rate, it would take 38 years for free-lunch eligible children to match more affluent children in Math Grade 4 and 92 years for ELL students to equal non-ELL students. If present trends continue, Black students at the 90th percentile can expect to equal White students in the year 2107, a timeline that is somewhat beyond the goals of NCLB. For underperforming students in the other seven categories—Reading Grade 4 males and free-lunch eligible students, Math Grade 8 females and free-lunch eligible students, and Reading Grade 8 males, ELL, and free-lunch eligible students Reading Grade 4 males and free-lunch eligible students, Math Grade 8 females and free-lunch eligible students the gap would never close.

### NAEP 90TH PERCENTILE SCORES: STATE DATA

The results are similarly discouraging when examined at the state level (Table 5). Aggregating data at the national level partially conceals the diversity of state success in reducing achievement gaps. Excellence gaps are shrinking in a majority of states for most subgroups and exams, with the exception of English Language Learners on Reading tests and gender gaps on Grade 8 Math exams. However, as with national-level results, progress has been slow and inconsistent: An average of 21 states has excellence gaps that are worsening across grades and content areas. Even among the states with improving excellence gaps, in most cases it would take decades—an average of 29 years—for the gaps to close completely. Although underrepresented subgroups are experiencing substantial gains in some states, *there are no "model" states that are closing gaps among all subgroups or types of exam.*

The existence of a NAEP excellence gap is clear using either proficiency levels or percentile scores. The chief distinction between the two strategies is with regard to trends. Proficiency-level data suggest that gaps among subgroups are widening, but 90th percentile data suggest gaps are narrowing—but only in some instances and very slowly.[10] There remain large and hard-to-address imbalances in academic performance among subgroups of high-achieving students. In sum, there is strong evidence of large and persistent excellence gaps whether the excellence gaps are measured by the percent scoring at the advanced level or 90th percentile scores.

[10] With respect to achievement gaps, 2009 NAEP Math scores at the 90th percentile were disappointing. In analyzing the long-term trend (2003-2009), the improvement in scores stalled in 2009 for all but non-FARM and White students. The relative gains for ELL, FARM, and Hispanic students since were entirely given up, and the gap has widened for Black students. In Grade 8, however, scores continued to improve for all but ELL students. Since 2003 the excellence gap has widened for ELL and FARM students but declined for Black and Hispanic students, although the pace remains extremely slow. At the present rate it will take approximately 60-70 years to close the gap entirely for Black and Hispanic students and there is little evidence that present policies are closing the gap for ELL or FARM students.

Most states saw increases in student performance in comparison with 2007 with the exception of ELL students. There was a deterioration in gap trends, with fewer states posting improving gaps for FARM and ELL students in both grades and Black students in Grade 8. States had more success in closing achievement gaps in Grade 8.

**Table 5. Trends in State Excellence Gaps at the 90th Percentile**

| Subject, Grade, Group | # of States with Improving Gaps | # of States with Worsening Gaps | Median Years to Close Gap Among Improving States |
|---|---|---|---|
| Math 4 FARM | 29 | 21 | 41 |
| Math 8 FARM | 26 | 24 | 39 |
| Reading 4 FARM | 26 | 24 | 45 |
| Reading 8 FARM | 31 | 19 | 28 |
| Math 4 WB | 33 | 9 | 32 |
| Math 8 WB | 27 | 13 | 33 |
| Reading 4 WB | 25 | 16 | 39 |
| Reading 8 WB | 27 | 13 | 35 |
| Math 4 WH | 26 | 16 | 32 |
| Math 8 WH | 20 | 16 | 32 |
| Reading 4 WH | 21 | 19 | 36 |
| Reading 8 WH | 26 | 10 | 30 |
| Math 4 MF | 27 | 23 | 15 |
| Math 8 MF | 15 | 35 | 10 |
| Reading 4 FM | 33 | 17 | 14 |
| Reading 8 FM | 35 | 15 | 26 |
| Math 4 ELL | 20 | 18 | 17 |
| Math 8 ELL | 12 | 12 | 23 |
| Reading 4 ELL | 17 | 18 | 14 |
| Reading 8 ELL | 7 | 13 | 30 |

## SECTION III: EXCELLENCE GAPS ON STATE ASSESSMENTS

**Summary**

- **The majority of states experienced increases in the percent of students performing at advanced levels on state assessments.**
- **Given the wide variation in how "advanced" is defined among states, it is difficult to determine if these increases reflect actual improvement in advanced performance.**
- **Regardless, the majority of states also experienced worsening excellence gaps.**
- **Individual profiles for each of the 50 states are available at http://ceep.indiana.edu/mindthegap.**

Under NCLB, state education agencies (SEAs) have developed their own assessment and accountability systems paralleling the NAEP, tracking student performance at multiple grade levels, achievement levels, and demographic subgroups. This analysis focuses specifically on the achievement for economically disadvantaged, Black, and Hispanic students. In an exhaustive process, the Center for Evaluation and Education Policy (CEEP) sought results from state assessments in elementary, middle, and high school—Grades 4, 7, and 11 when possible—for all 50 states. CEEP staff eventually acquired information from 43 states. In several instances, complete state assessment data were not available. In addition, some states do not fully disaggregate by subgroup, proficiency level, and grade level. In some circumstances, only performance for FARM students was reported, but sufficient data were available to estimate non-FARM achievement for the purposes of comparison. State profile pages have been created and are available at http://ceep.indiana.edu/mindthegap.[11] The analysis below (Table 6) focuses on results from state assessments between the 2005 and 2007 school years, which yielded the greatest number of states with complete data.

State tests vary widely in content and rigor, and it would be inappropriate to compare results directly to NAEP, given the very different scales of the two measures.[12] Even when trends in the size of excellence gaps on NAEP and state tests are compared on relevant, similar data, the correlation between the two types of tests does not approach statistical significance. Gap trends based on proficiency cut scores can also present a misleading picture of trends, as has been discussed in more detail above. However, an examination of the states based on their own metrics does indicate the presence of an excellence gap. Of those states for which data are available for 2008, all of them indicated an excellence gap in elementary, middle, and high school for all subgroups. State assessments demonstrate gains for most subgroups in most states, with a greater preponderance of states seeing increases in earlier grades and in mathematics than in

[11] The pages include not just state assessment data, but NAEP and AP data as well as information about state gifted policy. The data will be updated in the future as assessment data become more accessible, and the site should provide policymakers, researchers, and stakeholders with a valuable snapshot of each state's educational status.

[12] However, a recent study by IES suggested that average state assessments have proficiency thresholds that would rank below the proficiency thresholds on the NAEP. In Reading, state assessment cut-points are often below the NAEP's threshold for *basic* performance.

reading and high school. However, the majority of states also experienced increased excellence gaps, strongly suggesting that *the increase in students performing at advanced levels on state tests is not being shared by all subgroups of students*.

**Table 6. State Assessments and the Excellence Gap**

<table>
<tr><th rowspan="2">Subject</th><th rowspan="2">Grade Level</th><th rowspan="2">Subgroup</th><th colspan="2">Students Performing at Advanced Levels</th><th colspan="2">Excellence Gaps</th></tr>
<tr><th>States Showing Improvement</th><th>States Showing Declines</th><th>States with Worsening Gaps</th><th>States with Improving Gaps</th></tr>
<tr><td rowspan="15">Math</td><td rowspan="5">Elementary</td><td>White</td><td>25</td><td>9</td><td rowspan="3">WB: 19<br>WH: 20</td><td rowspan="3">WB: 14<br>WH: 19</td></tr>
<tr><td>Black</td><td>32</td><td>5</td></tr>
<tr><td>Hispanic</td><td>28</td><td>8</td></tr>
<tr><td>Non-FARM</td><td>23</td><td>9</td><td rowspan="2">20</td><td rowspan="2">7</td></tr>
<tr><td>FARM</td><td>22</td><td>8</td></tr>
<tr><td rowspan="5">Middle</td><td>White</td><td>34</td><td>3</td><td rowspan="3">WB: 28<br>WH: 27</td><td rowspan="3">WB: 7<br>WH: 10</td></tr>
<tr><td>Black</td><td>33</td><td>2</td></tr>
<tr><td>Hispanic</td><td>34</td><td>3</td></tr>
<tr><td>Non-FARM</td><td>31</td><td>2</td><td rowspan="2">27</td><td rowspan="2">4</td></tr>
<tr><td>FARM</td><td>32</td><td>1</td></tr>
<tr><td rowspan="5">High</td><td>White</td><td>16</td><td>11</td><td rowspan="3">WB: 19<br>WH: 20</td><td rowspan="3">WB: 12<br>WH: 7</td></tr>
<tr><td>Black</td><td>16</td><td>9</td></tr>
<tr><td>Hispanic</td><td>18</td><td>10</td></tr>
<tr><td>Non-FARM</td><td>17</td><td>10</td><td rowspan="2">15</td><td rowspan="2">16</td></tr>
<tr><td>FARM</td><td>12</td><td>13</td></tr>
<tr><td rowspan="15">Reading</td><td rowspan="5">Elementary</td><td>White</td><td>24</td><td>10</td><td rowspan="3">WB: 21<br>WH: 20</td><td rowspan="3">WB: 14<br>WH: 17</td></tr>
<tr><td>Black</td><td>20</td><td>9</td></tr>
<tr><td>Hispanic</td><td>18</td><td>13</td></tr>
<tr><td>Non-FARM</td><td>26</td><td>8</td><td rowspan="2">18</td><td rowspan="2">11</td></tr>
<tr><td>FARM</td><td>22</td><td>8</td></tr>
<tr><td rowspan="5">Middle</td><td>White</td><td>32</td><td>6</td><td rowspan="3">WB: 22<br>WH: 20</td><td rowspan="3">WB: 14<br>WH: 14</td></tr>
<tr><td>Black</td><td>29</td><td>3</td></tr>
<tr><td>Hispanic</td><td>27</td><td>5</td></tr>
<tr><td>Non-FARM</td><td>27</td><td>6</td><td rowspan="2">25</td><td rowspan="2">8</td></tr>
<tr><td>FARM</td><td>27</td><td>4</td></tr>
<tr><td rowspan="5">High</td><td>White</td><td>15</td><td>15</td><td rowspan="3">WB: 16<br>WH: 12</td><td rowspan="3">WB: 15<br>WH: 15</td></tr>
<tr><td>Black</td><td>14</td><td>12</td></tr>
<tr><td>Hispanic</td><td>14</td><td>15</td></tr>
<tr><td>Non-FARM</td><td>16</td><td>13</td><td rowspan="2">16</td><td rowspan="2">12</td></tr>
<tr><td>FARM</td><td>14</td><td>12</td></tr>
</table>

## SECTION IV: RELATIONSHIP BETWEEN MINIMUM COMPETENCY GAPS AND EXCELLENCE GAPS

**Summary**

- **The size of NAEP excellence gaps appears to be – at best – moderately correlated with achievement gaps at the NAEP basic and proficient levels.**
- **These correlations in general appear to be much weaker with the Grade 4 math data.**
- **These preliminary results suggest that focusing only on minimum competency gaps is not a sound strategy for reducing excellence gaps.**

Achievement gaps exist at all levels of academic performance. Identifying a gap among high performers need not be treated as a distinct problem if the gaps were closely related to gaps at other levels of achievement. In other words, it might be possible that policies that narrow the gap among those reaching minimum competency might also narrow the gap at the proficient and advanced level. This is the question of chain-connectedness, or to put it differently, to ask whether a rising tide in fact lifts all boats.

The evidence suggests that this is not the case, and that the act of helping underrepresented students trying to reach basic competence by itself seems unrelated to the scores of their peers at higher levels of achievement. The data displayed in Table 7 are from bivariate correlations between the change in the size of achievement gaps between 2003 and 2007 at the basic,[13] proficient, and advanced levels at the state level. *If* achievement gaps were chain-connected, then the correlations would be large, positive, and statistically significant across different subgroups and for different tests. Before continuing, it should be emphasized that this analysis is only suggestive and is indicative of the need for further research: it is possible that the relationships, or lack thereof, could be a product of distribution of the data and random error rather than a real underlying phenomena.

The analysis presented below provides little support for the contention that trends in minimum competence have much effect on the excellence gap, particularly in Grade 8. The relationship is positive and statistically significant for Black students in Reading Grade 4, for Hispanic students in Math Grade 4, for ELL students in Math Grade 8, and for FARM students in Reading Grade 4. The relationship was stronger for the gender gap. In addition, the relationship between gap trends at the basic and advanced level was below .500 in all but one instance. For Black students in Math Grade 4, the result is statistically significant, but *negative*, i.e., as a larger share of those groups reach minimum competence, the excellence gap *increases*.

[13] The gaps for proficiency and advanced status are discrete (drawn from the percent of students scoring at that level), while that for basic status is cumulative (scoring at basic or above). Doing otherwise can lead to misleading results, as advantaged students tend to begin with a smaller pool of students at the basic level. Students who score at the advanced level are therefore counted twice, which makes the weak relationship between change at the advanced and basic level even more striking.

**Table 7. Relationship Between Achievement Gaps**

| Excellence Gaps | Basic Gap | Proficient Gap |
|---|---|---|
| Math 4 WB | -.27 | .01 |
| Math 8 WB | .09 | .56* |
| Reading 4 WB | .33* | .67* |
| Reading 8 WB | -.02 | .52* |
| Math 4 WH | .32* | .16 |
| Math 8 WH | .10 | .70* |
| Reading 4 WH | .14 | .30 |
| Reading 8 WH | .27 | .49* |
| Math 4 ELL | .23 | .03 |
| Math 8 ELL | .42 | .57* |
| Reading 4 ELL | .26 | .54* |
| Reading 8 ELL | .04 | 0.14 |
| Math 4 MF | .43* | 0.02 |
| Math 8 MF | .29* | .57* |
| Reading 4 FM | .55* | .78* |
| Reading 8 FM | .03 | .41* |
| Math 4 FARM | -.14 | 0.21 |
| Math 8 FARM | -.15 | .57* |
| Reading 4 FARM | .37* | .75 |
| Reading 8 FARM | .20 | .37* |

*statistically significant at .05 level
**statistically significant at .01 level

There is evidence for a degree of chain-connectedness between proficient and advanced students, however. There is a positive and significant relationship for all subgroups on Math Grade 8 and Reading Grade 4 NAEP tests, and for all but Hispanic students on Reading Grade 8 tests, but for no groups on Math Grade 4 tests. The relationship is positive for all groups and on all tests. In sum, trends in basic competence are weakly related to trends in the excellence gap, and gaps for Grade 4 Math tests appear particularly problematic.

## SECTION V: POLICIES THAT IMPACT EXCELLENCE GAPS

**Summary**

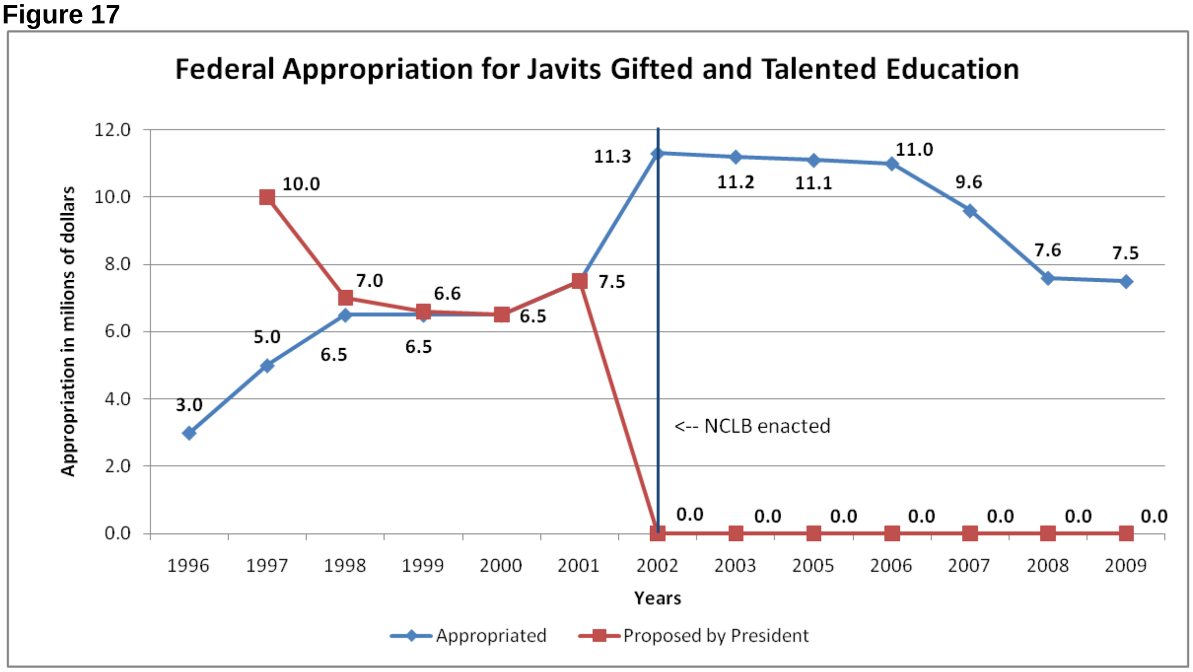
- **The federal role in addressing excellence gaps has been very small.**
- **Policy at the state and local levels has been highly inconsistent.**

If, as the analysis in the previous section suggests, addressing differences in educational opportunities for the highest achievers requires a unique response, then that response must be part of an effort by national and state policymakers targeted towards potentially high achieving students.

Gifted education is not synonymous with education for excellence, but it is within gifted education that one finds most concerted efforts that focus on high achievement. However, the federal government has played little role in gifted education. The Jacob Javits Gifted and Talented Students Education Act, passed in 1988, funds research and demonstration projects related to gifted education rather than direct federal support. A major emphasis of the program is "to help reduce the serious gap in achievement among certain groups of students at the highest levels of achievement."[14] The program is small and recently in decline (Figure 17).

In fact, in a recent survey by the National Association for Gifted Children (NAGC), 28 of 41 SEAs claimed that federal policy—in the form of NCLB—had had a detrimental effect on gifted education, due to the law's focus on underperforming students, effects on the level of gifted education funding, the lack of gifted education language in the law, and a concentration on standardized testing that discourages investment in services to gifted children.

**Figure 17**




[14] Retrieved from http://www.ed.gov/programs/javits/index.html

With the federal government largely absent from gifted education, states bear the financial and policy responsibility. States have demonstrated a widely varying commitment to gifted education. In 2007, only half (25) of states had mandates to both identify and serve gifted students, and only 29 states tracked the number of gifted students (14 by gender and 16 by ethnic background, with 10 states identifying both categories). A total of 33 states appropriated funds specifically for gifted education, while 29 states both identified the number of gifted students and designated state funds for gifted education, spending an average of $438.92 per gifted student. Fifteen states did not specify funds for gifted student services, packaging them with general special education funding. These states leave the responsibility for serving the needs of gifted education students to local school districts. According to the NAGC survey:

> "This unevenness in funding and resources, even in states that mandate gifted education services, means the availability of and range of services is largely dependent on the ability and desire of a school district to fund gifted and talented education programs with local school dollars."

The decentralization of gifted education funding and policy could be one of the reasons for persisting and widely varying excellence gaps. Because these services are generally up to the discretion of districts, those school districts with greater resources (which tend to be whiter and more affluent) would be more likely to provide gifted education programs to their talented students. Poorer districts, which often have greater Black, Hispanic, and ELL populations, would be unable to provide their students with the same opportunities. Regrettably, there are not yet sufficient district- and school-level data to evaluate this possibility.

Detailed state information is presented in Table 8, with data drawn from a survey of state education agencies conducted by NAGC, website searches, and direct contact with the state educational policy researchers and state agencies. Data presented are for the 2006 school year. Some states have altered their policies or funding levels since 2006-07. For example, the state of Indiana now mandates both identification and service of gifted students and appropriated $12.78 million for FY 2008. According to the 2008-2009 NAGC survey, 32 of 47 states mandated identification, service, or both to gifted students. Twenty-five states funded their mandates (only six were fully funded). Eighteen states provided no dedicated funding to gifted education.[15]

There is some evidence that state gifted education policies can influence the size of excellence gaps. A forthcoming report by CEEP will provide evidence that certain state education policies may have a small but positive relationship with shrinking excellence gaps.

[15] The Davidson Institute also maintains a state-by-state database of gifted education policies at http://www.davidsongifted.org/db/StatePolicy.aspx.

**Table 8. State Gifted Education Policy 2006-2007**

| State | Mandate Identify | Mandate Services | Gifted Identified 06-07 | Identified by Gender | Identified by Ethnicity | GT Funding 2006-07 |
|---|---|---|---|---|---|---|
| Alabama | yes | yes | 32,390 | no | no | $2,300,000 |
| Alaska | NA | NA | NA | NA | NA | NA |
| Arizona | yes | yes | 75,121 | yes | yes | $3,192,500 |
| Arkansas | yes | yes | 42,600 | no | no | $2,565,585 |
| California | no | no | 512,698 | yes | yes | $54,000,000 |
| Colorado | yes | yes | 56,133 | no | yes | $7,700,000 |
| Connecticut | yes | no | 9,082 | yes | yes | $100,000 |
| Delaware | no | no | not collected | no | no | $0 |
| Florida | yes | yes | 126,795 | no | yes | $0 |
| Georgia | yes | yes | 181,058 | no | no | $197,182,317 |
| Hawaii | yes | yes | 9,538 | no | no | $745,410 |
| Idaho | yes | yes | 14,610 | no | no | $8,510,000 |
| Illinois | no | no | not collected | no | no | $0 |
| Indiana | no | no | 106,263 | yes | yes | $5,836,340 |
| Iowa | yes | yes | 40,523 | yes | yes | $30,608,832 |
| Kansas | yes | yes | 14,376 | no | yes | $11,846,869 |
| Kentucky | yes | yes | 113,671 | yes | no | $7,100,000 |
| Louisiana | yes | yes | 19,848 | yes | no | $30,000,000 |
| Maine | yes | yes | 7,285 | NA | NA | $4,335,553 |
| Maryland | yes | yes | Not collected | no | no | $459,829 |
| Massachusetts | no | no | Not collected | no | no | $740,000 |
| Michigan | no | no | 52,756 | no | yes | $285,000 |
| Minnesota | no | no | Not collected | no | no | $8,575,368 |
| Mississippi | yes | yes | 31,658 | no | no | $39,859,329 |
| Missouri | no | no | Not collected | no | no | $0 |

Table 8 continued on next page.

**Table 8, continued. State Gifted Education Policy 2006-2007**

| State | Mandate Identify | Mandate Services | Gifted Identified 06-07 | Identified by Gender | Identified by Ethnicity | GT Funding 2006-07 |
|---|---|---|---|---|---|---|
| Montana | yes | yes | 8,686 | yes | no | $150,000 |
| Nebraska | yes | no | 42,212 | no | yes | $2,800,000 |
| Nevada | no | no | Not collected | no | no | $0 |
| New Hampshire | no | no | Not collected | no | no | $0 |
| New Jersey | yes | yes | Not collected | no | no | $0 |
| New Mexico | yes | yes | 13,056 | no | no | $32,955,541 |
| New York | no | no | Not collected | no | no | $0 |
| North Carolina | yes | yes | 150,000 | no | NA | $53,000,000 |
| North Dakota | no | no | Not collected | no | no | $200,000 |
| Ohio | yes | no | 286,604 | no | yes | $47,200,000 |
| Oklahoma | yes | no | 103,546 | yes | yes | $48,636,241 |
| Oregon | yes | yes | NA | no | no | $0 |
| Pennsylvania | yes | yes | 71,830 | no | no | $0 |
| Rhode Island | no | no | Not collected | no | no | $0 |
| South Carolina | yes | no | Not collected | yes | yes | $29,527,829 |
| South Dakota | no | no | Not collected | no | no | $0 |
| Tennessee | no | no | Not collected | no | no | $0 |
| Texas | yes | yes | 343,158 | yes | yes | $77,191,366 |
| Utah | yes | yes | Not collected | no | no | $13,968,167 |
| Vermont | no | no | Not collected | no | no | $0 |
| Virginia | yes | yes | 160,603 | yes | yes | $27,685,985 |
| Washington | no | no | 35,600 | yes | yes | $6,200,000 |
| West Virginia | no | yes | 4,988 | no | no | $0 |
| Wisconsin | yes | yes | Not collected | no | no | $282,000 |
| Wyoming | no | no | Not collected | yes | no | NA |

*Note*. NA = information not available

## SECTION VI: CONCLUSIONS AND RECOMMENDATIONS

This brief has attempted to address a number of questions concerning the excellence gap in K-12 education:

**1. Is There an Excellence Gap in K-12 Education?**
A convincing body of evidence suggests that an achievement gap exists at higher levels of academic performance. The economically disadvantaged, English Language Learners, and historically underprivileged minorities represent a smaller proportion of students scoring at the highest levels of achievement. There is a gender gap as well, with females performing better in reading and males in performing better in math. The presence of an excellence gap is demonstrated both on national and state assessments of student performance. In addition, the proportion of all students (including more advantaged groups) that score at the highest level constitutes a relatively small share of all students, although national data suggests this situation is improving at some grade levels in some content areas.

**2. Is the Excellence Gap Growing or Shrinking under NCLB?**
As measured by the percentage of students scoring at the advanced level on the NAEP, the excellence gap has been stable or growing for each type of demographic group (gender, ELL, race, and free lunch eligibility). Since 2003, the proportion of these students' academic scores either stagnated or increased slightly, while over-represented groups have generally increased their educational performance. Trends of state assessments are equally troubling. Defining the excellence gap as gaps in performance at the NAEP 90$^{th}$ percentile gives somewhat different results, but although excellence gaps using this comparison are shrinking, they are doing so quite slowly. Whichever measure is employed, the final conclusion is clear: there has been little progress in substantially reducing excellence gaps since the passage of NCLB, particularly in reading. That said, there is little existing evidence to support claims that NCLB-mandated accountability systems are increasing excellence gaps.

**3. Are Achievement Gaps at the NAEP Basic and Advanced Levels Related?**
Whatever the effectiveness of ESEA/NCLB in shrinking the achievement gap at the level of minimum competence, there appears to be little comparable improvement at the advanced level. The relationship between gaps at the basic and advanced levels is weak at best. For Black and lower income students, smaller achievement gaps among minimally competent students is related to larger gaps among advanced students. However, gaps at the proficient and advanced levels exhibit some inter-relationship. Does a rising tide lift all ships? Our results suggest that the answer is "maybe," but if it does lift all ships, it lifts some more than others.

**4. How Do State and National Policies Affect Excellence Gaps?**
The federal government has paid scarce attention to achievement gaps at advanced levels of education or to advanced students generally, a neglect that is reflected in the focus of NCLB on minimum competency and the very small sum of federal monies targeted to gifted education. State governments demonstrate a widely varying commitment to educational excellence and gifted education, with a substantial number of states leaving advanced education entirely in the

hands of local school districts. There are tentative results suggesting that specific state-level policies could help reduce the size of excellence gaps, but a great deal of further study is required before any definitive conclusions can be reached.

## RECOMMENDATIONS

Although there is evidence that large excellence gaps have existed in this country for many generations—and that too few American students achieve at the highest levels—a skeptic could note that these problems do not appear to have harmed the country in any great way.[16] This logic is understandable, but we believe it ignores at least four relatively recent developments that have greatly changed our national context.

Many commentators have noted that the world's best and brightest have traditionally been drawn to the United States for economic opportunity and freedom: Estimates of the percent of foreign-born PhDs working in science and engineering in the United States range from 36-40% (National Science Board, 2010). Due to (1) tighter immigration laws and regulations and (2) more opportunities in their home countries, many of these individuals are choosing to return home after university education in the U.S. – or simply stay home for postsecondary education and subsequent careers. Although we are generally not international alarmists, the (3) strong, recent emphasis on excellence and innovation through education in many developing and developed countries creates a strong competitive disadvantage to the American economy over the long term, especially as the proportion of underperforming American subgroups (i.e., Hispanic, ELL, and FARM students) increases.

Finally, (4) the current emphasis on minimum competency has pushed support for high-achieving students into the background of our national, state, and local conversation, a conversation that gave little attention to high-end learning *before* NCLB. Over time, the combination of these factors may have a negative effect on American economic competitiveness. Indeed, a recent report by McKinsey & Company (2009) suggests that the economic loss from achievement gaps – both minimum competency gaps and excellence gaps – is already substantial.

As a case in point, the National Science Board's (2010) recent report, *Science and Engineering Indicators 2010*, highlights some troubling data about recent trends in science, technology, engineering, and mathematics. Although the Board correctly suggests a wide range of potential causes for these trends, the report includes this cautionary note:

> The growth rate of the S&E labor force would be significantly reduced if the United States became less successful in the increasing international competition for scientists and engineers. Compared with the United States, many other countries are more actively reducing barriers to highly skilled immigrants entering their labor markets. Nonetheless,

[16] See Salzman & Lowell (2008) for such an argument.

> the United States is still an attractive destination for many foreign scientists and engineers. (p. 3-58)[17]

The report suggests that this is indeed beginning to happen, citing a forthcoming study by Finn, with the percentage of 2002 foreign doctorate recipients staying in the U.S. decreasing from 2003 to 2007, with the trend being somewhat stronger among graduates of top-rated programs.

In many ways, we are continually surprised that so few people appear to have considered the implications of not focusing on developing high-achieving students. But what may be even more perplexing is that the solutions to this problem, at least the initial steps, are not that difficult to identify:

**1. Make Closing the Excellence Gap a National and State Priority.**

Wyner, Bridgeland, and DiIulio (2009) estimate that 3.4 million high-achieving children live in households below the national median in income, over 1 million of whom qualify for free or reduced-price meals. They found evidence that, compared to upper-income children of similar ability, these children are more likely to show decreased achievement in later grades and drop out of high school, and they are less likely to attend college and earn a degree. Given the well-documented personal and economic costs of academic underachievement, this study illustrates the immediate and long-term dangers posed by festering excellence gaps.

Clearly this is an important national issue, and the scope of the problem is large. Whenever discussing education policy at any level, two questions should always be asked:

> How will this affect our brightest students?
> How will this help other students begin to achieve at high levels?

When reauthorizing ESEA, the questions should be asked. When debating a state funding formula or the creation of charter schools, the questions should be asked. When implementing a new high school chemistry curriculum, the questions should be asked. Until those two queries are reflexively added to each and every public discussion about education, we remain at jeopardy of letting excellence gaps persist for another generation of students. We believe changing the national discussion is achievable. It took years to get the needs of special education students front and center during these conversations, but it now happens. And policymakers have begun to ask routinely about how specific policies impact our STEM pipeline. One immediate step that can be taken is for the federal government (and all states) to publicize advanced level results in achievement testing reports, which would encourage the consideration of high-ability students during the policy-making process.

[17] In a related vein, Kerr & Lincoln (2008) provide interesting data on the positive impact of immigration on innovation.

**2. Acknowledge That Both Minimum Competency and Excellence Can be Addressed at the Same Time.**

Data continue to emerge supporting the notion that focusing too tightly on minimum competency will not automatically lead to excellence. At the same time, no one argues that focusing tightly on excellence will automatically get all students up to minimum competency. So we ask the challenging question: Why not focus on both? If this country can put people on the moon using 1960s technology, creating educational systems that bring students to competency *and* promote their ability to excel in certain areas does not seem impossible.

At the same time, policymakers need to acknowledge that, in most states, there are few financial incentives tied to moving students to high levels of achievement. Contrast that situation with the amount of funding targeted to struggling students. That funding may be well-warranted, but the current situation hardly comes across as an even-handed emphasis on the promotion of both excellence and minimum competency.

**3. Set a Realistic Goal to Shrink Gaps.**

Psychologists have noted that shrinking differences between groups is often difficult, because it is usually impractical (or unethical) to withhold an intervention from one group in order to benefit another. Yet both groups tend to benefit when an intervention is implemented – and the advantaged group, which may be better prepared to make use of the reforms, is often found to make more progress than the other group. [18] This phenomenon is not uncommon in education, and we suspect it would also apply here. This leads us to recommend avoiding Pollyanna-ish goals of "eradicating excellence gaps" that will never be achieved in our lifetimes. More reasonable goals might be, for example, to have at least 15% of students achieve at the NAEP Advanced Level, and to shrink most excellence gaps to 5% or less. Those targets will not be easy to achieve, yet they may be attainable.

**4. Determine the Appropriate Mix of Federal, State, and Local Policies and Interventions.**

Although new, innovative policies and practices will be needed, researchers and educators already know of several immediate steps that can be taken to promote high levels of achievement and shrink excellence gaps. For example, a number of recent reports have highlighted the advantages of certain approaches to ability grouping,[19] dual credit programs, Advanced Placement, and International Baccalaureate, among many others. Academic acceleration, a collection of interventions that allow bright students to proceed at a faster, more realistic pace of learning, enjoys tremendous research support yet is considerably underutilized

[18] See, for example, Ceci & Papierno (2005), Lubinski (2009), and Rothstein, Jacobsen, & Wilder (2006).

[19] We welcome the recent attention to ability grouping, which has considerable research support, but we dislike the frequent references to "tracking." Grouping is flexible, targeted, and not permanent; tracking historically refers to an inflexible approach to placing students in tracks from which they could not move. In many settings, tracking became an instrument for *de facto* segregation and, as such, the reemergence of the term as synonymous for "ability grouping" is distasteful. Tracking is unquestionably bad; ability grouping is arguably good.

(Colangelo, Assouline, & Gross, 2004). The National Research Center on the Gifted and Talented has conducted studies on the effects of specific interventions, a number of which show promising results.

Determining the proper mix of federal, state, and local policy, funding, and programming will not be easy, although we gently suggest that the highly chaotic nature of the current context provides us with a nearly blank slate. Currently, most decisions about gifted education are made at the local level, and when funding gets tight, programs designed to promote excellence are generally the first to go: Academic programs, artistic programs, music programs, and even the occasional athletic program. When funding isn't tight, a reflexive anti-intellectualism seeps into many of our minds, and excellence programs tend to fight constantly for their existence.[20] To overcome these problems, more responsibility for developing excellence in our K-12 schools needs to be assumed by state and national policymakers.

**5. Include the Performance of Advanced Students in Discussions of Common Standards.**

The current push for common standards presents a valuable opportunity to address the inconsistency among state policies for high ability students. Cross-state standards and testing regimes should have measurements with "high ceilings" and questions rigorous enough to capture the full range of student performance. States will need data capable of tracking the performance of high achievers if they are to craft comprehensive excellence policies that will reduce achievement gaps, and stakeholders will require such data if they are to hold state and local education agencies accountable.

The current call for "value-added" accountability systems may not directly benefit advanced students to the degree that many advocates expect. This approach, which focuses on student improvement rather than student performance at a single point in time, sounds helpful in theory. But in order to benefit advanced students, value-added systems need tests that have high ceilings: If a student gets nearly every item on a test correct at the beginning of the year, it is difficult to imagine how a test will show that "value" has been added at the end of the year.

**6. Address the "Low-hanging Policy Fruit" Immediately.**

Each state should quickly examine its policies that may help or hinder the promotion of high achievement in its K-12 schools. For example, we worked in one state that provided substantial financial aid for college to residents … but only if they had a high school diploma. Talented students who entered postsecondary education early were prohibited from receiving any type of high school diploma and therefore could not receive financial aid. The historical reasons for these restrictions are clear, but the policymakers never asked themselves the two questions mentioned above: How will this affect our brightest students? How will this help other students

[20] At the same time, we do not agree with the continual characterization of Americans as "anti-intellectual." Clearly the United States values excellence, and we support those individuals who develop high levels of skill and achievement. What American anti-intellectualism may reflect is our disdain for opportunities being offered only to the privileged, which is one reason for the existence of excellence gaps in the first place.

begin to achieve at high levels? Changing those policies to allow for early college entrants would be a low-cost, low-risk, high-reward policy change.

Similarly, some states have rigid age cutoffs for when a child can start kindergarten. Setting a maximum age makes sense (i.e., all students must start kindergarten by the year they turn six), but allowing children to start school when they are ready to do so is another low-cost, talent development strategy (e.g., we have seen too many bright children have to wait a year for kindergarten because they missed the age cutoff *by a week*). Letting students progress through K-12 schools as quickly as their ability and desire allow is a common-sense, research-supported policy intervention that over time should *save* money for schools (see *A Nation Deceived* by Colangelo et al., 2004).

### 7. Conduct More Research – *Much* More Research – on Advanced Learning and Talent Development.

The amount of money devoted to research on gifted education at the K-12 level pales so drastically in comparison to other areas of education research that a statistical comparison is not necessary. As a result, our knowledge of interventions to reduce excellence gaps is not nearly as comprehensive as will be necessary to solve the problem.[21]

In this regard, we find the data in Table 3 to be especially troubling: When we identified states with improving performance at the advanced level *and* shrinking excellence gaps, there was no pattern at all to the states performing well in Grade 4 versus Grade 8, in mathematics versus reading. For example, the analyses identified six states shrinking the Black-White excellence gap in Grade 4 reading, four states in Grade 4 math, three in Grade 8 reading, and two in Grade 8 math – unfortunately, no state appeared in more than one category. If a state-initiated policy were responsible for the good news tracked in Table 3, one would expect a state to show up in multiple categories. That this did not occur suggests that either little state-level policy work is helping the situation, and/or policies are widely inconsistent within states. Available evidence suggests that both explanations may be valid.

Yet increasing the federal support of research on high achievement need not require new funding – money could be set aside in existing U.S. Department of Education and National Science Foundation programs to fund applied research on high-end learning. Or grantees in specific programs could be required to evaluate how their projects impact high-achieving students rather than report only aggregated outcomes for all students.

[21] However, Harris and Harrington (2006) argue convincingly that we have little evidence that accountability-based interventions, among the most popular reforms of the past few generations, have significant impact on any achievement gaps. The lack of research on interventions spreads beyond the excellence gap.

## FINAL THOUGHTS

Martin Jenkins once wrote,

> [T]he conservation of intellectual capital is one of the major obligations of education … this responsibility is particularly incumbent upon schools serving [African American] youth…. We can ill-afford to squander our intellectual capital by neglecting the development of those highly endowed individuals who are best fitted to assume positions of leadership…. To identify exceptional individuals, to provide opportunity for their development, to stimulate them to their highest achievement, to assure that their potentialities become actualities, are both an obligation of and an opportunity for teachers of [African American] youth. (pp. 322, 332)

After compiling the data for this report, Jenkins' thoughts resonated with us for two reasons. First, in the sentences above, "African American" can be replaced with "Hispanic," "poor," or "ELL" and be similarly relevant. Second, Jenkins published his comments *60 years ago*, yet the problems persist and, in some cases, appear to be worsening.

However, the question of whether high-achieving students are "worse off" under the NCLB policies is moot: They were not "better off" before NCLB. This may have had a limited effect on our society and economy as a whole, but changing immigration patterns, the rapid improvement of education and economies in developing countries, and a heavy focus on talent development – and competition for the talented – in both developing and developed countries has drastically changed the playing field for American education.

We encourage educators, parents, and policymakers to focus more attention on the excellence gap. This attention need not come at the cost of addressing minimum competency gaps – the shrinking of which remains a necessary and noble goal. Yet continuing to pretend that a nearly complete disregard of high achievement is permissible, especially among underperforming subgroups, is a formula for a mediocre K-12 education system and long-term economic decline.

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## APPENDIX

## NAEP Excellence Gap Results at National Level from 2003-07 (i.e., the NCLB Era)

### Table 9. Percent of Students Scoring Advanced on NAEP

| Subject, Grade, Group | 2003 | 2007 | Change | Change in Excellence Gap |
|---|---|---|---|---|
| Math 4 Male | 4.89% | 6.63% | +1.74% | +0.17% |
| Math 4 Female | 2.92% | 4.49% | +1.57% | |
| Math 8 Male | 6.12% | 8.10% | +1.98% | +0.75% |
| Math 8 Female | 4.65% | 5.88% | +1.23% | |
| Reading 4 Male | 6.18% | 6.54% | +.36% | -0.29% |
| Reading 4 Female | 9.21% | 9.28% | +.07% | |
| Reading 8 Male | 2.01% | 1.75% | -0.26% | +0.26% |
| Reading 8 Female | 4.31% | 3.79% | -0.52% | |
| Math 4 ELL | .42% | .87% | +0.45% | +1.33% |
| Math 4 Non-ELL | 4.27% | 6.05% | +1.78% | |
| Math 8 ELL | .68% | 1.09% | +0.41% | +1.30% |
| Math 8 Non-ELL | 5.64% | 7.35% | +1.71% | |
| Reading 4 ELL | .91% | .84% | -0.07% | +0.38% |
| Reading 4 Non-ELL | 8.25% | 8.56% | +0.31% | |
| Reading 8 ELL | .12% | .23% | +0.11% | -0.30% |
| Reading 8 Non-ELL | 3.31% | 2.90% | -0.41% | |
| Math 4 FARM | .84% | 1.50% | +0.66% | +1.98% |
| Math 4 Non FARM | 6.11% | 8.75% | +2.64% | |
| Math 8 FARM | 1.18% | 1.74% | +0.56% | +0.27% |
| Math 8 Non FARM | 7.37% | 9.96% | +2.59% | |
| Reading 4 FARM | 2.21% | 2.31% | +0.10% | +0.55% |
| Reading 4 Non-FARM | 11.04% | 11.69% | +0.65% | |
| Reading 8 FARM | .88% | .59% | -0.29% | -0.01% |
| Reading 8 Non-FARM | 4.02% | 3.72% | -0.30% | |
| Math 4 White | 5.48% | 7.58% | +2.10% | +1.70% White-Black<br>+1.48% White-Hispanic |
| Math 4 Black | .37% | .77% | +0.40% | |
| Math 4 Hispanic | .83% | 1.45% | +0.62% | |
| Math 8 White | 7.15% | 9.43% | +2.28% | +1.88% White-Black<br>+1.79% White-Hispanic |
| Math 8 Black | .51% | .91% | +0.40% | |
| Math 8 Hispanic | 1.32% | 1.81% | +0.49% | |
| Reading 4 White | 10.62% | 10.75% | +0.13% | -0.01% White-Black<br>-0.23% White-Hispanic |
| Reading 4 Black | 1.74% | 1.88% | +0.14% | |
| Reading 4 Hispanic | 2.42% | 2.78% | +0.36% | |
| Reading 8 White | 4.28% | 3.81% | -0.47% | -0.36% White-Black<br>-0.37% White-Hispanic |
| Reading 8 Black | .53% | .42% | -0.11% | |
| Reading 8 Hispanic | .81% | .71% | -0.10% | |

There is a consistent pattern for NAEP proficiency-level data on Math tests. In both Grades 4 and 8, there have been increases in the proportion of students registering at the advanced level across subgroups, but males, non-ELL, non-FARM, and White students have outpaced their peers, leading to a widening of the excellence gap. The picture is more ambiguous for Reading. There was an increase in performance across subgroups between 2003 and 2007 in Grade 4, with general increases across subgroups. As with the mathematics exams, the excellence gap widened on Reading Grade 4 tests for ELL and FARM students. However, Black students, Hispanic students, and males began to close the gap with a faster increase than White and female students, respectively. The results on Reading Grade 8 NAEP tests were less encouraging, with only ELL students posting a (small) increase in the percentage of students reaching the advanced level. The excellence gap narrowed for males, FARM, and minority students, but only because those groups declined less quickly than over-represented groups. It is also worth noting that across exams males increased their performance relative to females, shrinking their disadvantage in Reading and increasing their advantage in Math.

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## ABOUT THE CENTER

The purpose of the Center for Evaluation and Education Policy (CEEP) at Indiana University is to promote and support rigorous, nonpartisan program evaluation and education policy research. Recent Center projects include evaluations of large scale initiatives, randomized controlled trial studies of education programs, and formative and summative evaluations conducted for various state departments of education, national foundations, and non-profit organizations. These activities have occurred on the national, regional, and local levels, with projects ongoing or recently concluded internationally, nationally, and in all 50 states.

CEEP is located within a highly-ranked School of Education at one of the world's largest research institutions, Indiana University. Although CEEP's operations are semi-autonomous and fully self-funded, CEEP draws upon Indiana University's vast resources to deliver the most efficient combination of advanced evaluation methodologies, nonpartisan information and research, and cutting-edge technologies. The Center has over 100 researchers and support staff, with most senior personnel holding doctoral degrees and additional advanced training. The Center has a dynamic professional development program that provides staff with training in the latest conceptual, methodological, and organizational strategies and advances. Center staff frequently publish in major journals and present their work at major conferences.

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