

Renewing our Schools,
Securing our Future



Education: The State We're In

An Education Report Card for the State of California

August 2005



John D. Podesta
President and CEO
1333 H Street, NW, 10th Floor
Washington, DC 20005
(202) 682-1611
www.americanprogress.org



Robert L. Borosage
President
1025 Connecticut Avenue, NW, Suite 205
Washington, DC 20036
(202) 955-5665
www.ourfuture.org

ACKNOWLEDGEMENTS

Education: The State We're In was prepared by Elena Rocha and Amanda Sharkey, of the Center for American Progress, under the direction of Cindy Brown, Director of the *Renewing Our Schools, Securing Our Future: National Task Force on Public Education*. Center staff who contributed to this report include Anna Kim, Brian Komar, Rhian Kohashi O'Rourke, Natalie Pojman, Lydia Poon, Nick Rathod, Dan Restrepo, Ilia Rodriguez, Abigail Witt, and Center interns Aaron Hall, Shoshana Lew and Josh Rosenthal.

EDUCATION: THE STATE WE'RE IN

Education in America is a shared responsibility – shared among teachers and students, administrators and parents, and all levels of government. While the federal government plays targeted roles in education, such as providing extra support to high-poverty schools, making financial aid available to college students, and disseminating best practices in teaching and learning, it is states and local communities that bear the major public responsibility for education in the United States. States and districts establish and operate schools, set course content standards, and determine graduation requirements. Moreover, states and local communities provide more than 90% of the funding for public education. The strong influence exerted by states and localities means that educational practices and student performance vary widely from state to state and from district to district.

Education: The State We're In provides a comprehensive, state-by-state snapshot of education today in America. It brings together publicly available data on a number of topics and offers some indication of comparative performance by ranking states from best (1st) to worst (51st or the highest number) across a range of education issues. These state report cards begin with a broad look at education in each state on an important overall measure of performance – student proficiency in reading and math. A more in-depth examination of each state's education system follows, focusing on these seven areas:

1. The achievement gap
2. Early childhood education
3. The high-school-to-college pipeline
4. Accessibility of higher education
5. Participation in after-school programs
6. Standards and student performance measurement
7. Teachers' subject-matter qualifications

Education: The State We're In is a companion to *Getting Smarter, Becoming Fairer: A Progressive Education Agenda for a Stronger Nation*, the report of the *Renewing Our Schools, Securing Our Future* National Task Force on Public Education. The Task Force set out in early 2004 to develop a clear picture of America's education system at the start of the 21st century and to consider innovative strategies for revitalizing public education. The Task Force report addresses challenges and builds on opportunities that exist today in schools and communities across the 50 states to improve our nation's education system.

Education: The State We're In and *Getting Smarter, Becoming Fairer: A Progressive Education Agenda for a Stronger Nation* together give readers a picture of the current state of education across the country and provide recommendations at the national, state and local levels to guide politicians, policymakers, educators and administrators as they continue the challenging but vitally important work of preparing our public education system, and all the students within it, to meet the challenges of the 21st century.

California: The State We're In

Among the key findings for the state of California are:

1. The Achievement Gap

- 10% of low-income 4th graders are proficient in reading, compared to 34% of non-poor students. California ranks 26th in the nation on this measure.
- 11% of African-American 4th graders are proficient in reading, compared to 36% of white students. California ranks 20th out of 42 states that had data available on this measure.
- 9% of Latino 4th graders are proficient in reading, compared to 36% of white students. California ranks 32nd out of 41 states with data available on this measure.

2. Early Childhood Education

- 11% of 3-year-olds participate in state-sponsored pre-kindergarten or the federal Head Start program. California ranks 36th in the nation on this measure.
- 25% of 4-year-olds participate in such programs. California ranks 27th in the nation on this measure.

3. The High-School-to-College Pipeline

- The state's high-school graduation rate is 67%. California ranks 37th in the nation on this measure.
- 32% of high-school graduates are academically ready for college. California ranks 32nd in the nation on this measure.
- 48% of high-school graduates enroll in college the fall after they graduate. California ranks 44th in the nation on this measure.
- 50% of college freshmen earn a bachelor's degree within 6 years. California ranks 29th in the nation on this measure.

4. Accessibility of Higher Education

- 25% of the average family income is required to pay for annual community college expenses after accounting for financial aid. California ranks 36th in the nation on this measure.
- 32% of the average family income is required to pay for annual expenses at a 4-year public university, after accounting for financial aid. California ranks 39th in the nation on this measure.

- 100% of California's grants to college students are need-based. California ranks 1st among the 48 states and the District of Columbia, for which data are available on this measure.

5. Participation in After-School Programs

- 22% of youth go unsupervised after school. California ranks 15th in the nation on this measure.
- 12% participate in after-school programs. California ranks 21st in the nation on this measure.

6. Standards and Student Performance Measurements

- Among 4th graders, 39% of students are proficient on the state reading test, while 21% are proficient on the National Assessment of Educational Progress. With an 18-point gap, California ranks 6th in the nation on the disparity between state and national performance measures for 4th grade reading.
- In math, 45% of 4th graders achieve proficiency on the state math test, compared to 25% who do so on the NAEP. With a 20-point gap, California ranks 11th in the nation on this measure.
- Among 8th graders, 30% of students are proficient on the state reading test, while 22% achieve proficiency on the NAEP. With an 8-point gap, California ranks 5th out of 47 states with data available on this measure.
- In math, 30% of 8th graders achieve proficiency on the state math test, compared to 22% who do so on the NAEP. With an 8-point gap, California ranks 11th out of 47 states with data available.

7. Teachers' Subject-Matter Qualifications

- 27% of middle- and high-school classes in core academic subjects are taught by instructors who lack at least a college minor in their subject. California ranks 33rd in the nation on this measure.
- 27% of middle- and high-school classes in core academic subjects in high-poverty schools are led by teachers without at least a college minor in their subject. California ranks 9th of the 37 states with data available on this measure.

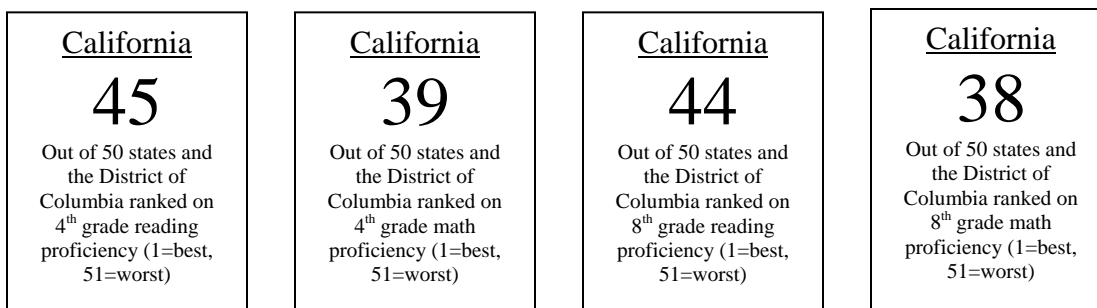
CALIFORNIA: AT A GLANCE

Proficiency in Reading and Math

Schools perform many functions in helping children develop into adults, but fundamental to their mission is promoting academic competency in core subjects, such as reading and math. One way to gauge how well schools are performing that function is measuring student achievement in reading and math. The National Assessment of Educational Progress (NAEP), known as the nation's report card, measures what students know and are able to do across a number of subjects by regularly testing a representative sample of students in each state.

In California, 21% of 4th graders scored at or above proficient on the NAEP reading test in 2003, and 25% achieved proficiency in math.ⁱ Nationally, 30% of public-school 4th graders were proficient in reading,ⁱⁱ and 31% were proficient in math.ⁱⁱⁱ California's 4th graders rank 45th among the 50 states in reading and 39th in math.

The state's 8th graders also participated in the NAEP. Approximately 22% of California 8th graders achieved proficiency in reading, compared to 30% of 8th grade students in public schools nationwide.^{iv} In math, 22% of California students scored at or above the proficient level, compared to 27% of students nationally.^v California's 8th graders rank 44th among the 50 states in reading and 38th in math.



CALIFORNIA: THE STATE WE'RE IN

The Achievement Gap

While the performance of students overall provides an important indication of how well schools are doing, it is also important to disaggregate those results to ensure that averages do not mask disparities in performance among different demographic groups of students. In America today, great divides in health, economic well-being and achievement continue to separate people of different races, ethnicities and income levels. Many of the disparities among adults can be traced back to an academic achievement gap that begins before children even enter school and persists all the way to college.

This achievement gap is evident across all states, but some have done a better job than others in ensuring that low-income students and students of color are educated to the same high level as other students. Although there are many ways to assess the achievement gap, it is measured here by comparing the share of fourth-graders in different racial/ethnic or income groups who achieve proficiency in reading.

In California, 10% of low-income 4th graders achieved proficiency in reading, compared to 34% of their more advantaged peers, leaving an achievement gap of 24 percentage points. Nationally, 15% of low-income students achieved proficiency, compared to 41% of non-poor students, for an achievement gap of 26 percentage points.^{vi} Compared to other states, California ranked 26th on the achievement gap between low-income students and non-poor students in 4th-grade reading.

Income is correlated with race/ethnicity and a sizable achievement gap also exists between white students and students of color. In California, 36% of white 4th graders achieved proficiency in reading, compared to 11% of African-American students and 9% of Latino students. This amounts to a 25-

California

26

Out of 50 states and the District of Columbia ranked on the gap between reading proficiency of low-income 4th graders and their more affluent peers (1=best, 51=worst)

California

20

Out of 42 states ranked on the gap between reading proficiency of white and African-American 4th graders (1=best, 42=worst)

California

32

Out of 41 states ranked on the gap between reading proficiency of white and Latino 4th graders (1=best, 41=worst)

percentage-point difference in proficiency rates between whites and African-Americans, and a 27-percentage-point disparity in proficiency rates between whites and Latinos. Nationally, 39% of white 4th graders achieved proficiency, compared to 12% of African-American students and 14% of Latino students.^{vii} California ranks 20th among the 42 states that reported this measure for African-Americans and 32nd among the 41 states that reported this measure for Latinos.

The achievement gap, so evident in the 4th grade, is rarely erased by the time students enter high school. Academically under-prepared for the demands of high school, many students opt to drop out. Unfortunately, students who drop out are disproportionately students of color. Nationally, 78% of white students graduate from high school in four years, compared to 56% of African-Americans and 52% of Latinos.^{viii}

Early Childhood Education

California

36

Out of 50 states and the District of Columbia ranked on the participation of 3-year-olds in pre-kindergarten (1=best, 51=worst)

California

27

Out of 50 states and the District of Columbia ranked on the participation of 4-year-olds in pre-kindergarten (1=best, 51=worst)

Across the country, too many of our students lack sufficient time for learning. American students begin to accumulate a time deficit with their international peers before they even enter kindergarten. Many other industrialized nations offer free or below-cost early childhood education to all families in order to ensure that students enter school ready to learn. In the United States, on the other hand, only 20% of 3- and

4-year-olds are enrolled in state-sponsored pre-kindergarten or the federally-supported Head Start program. In California, 11% of 3-year-olds and 25% of 4-year-olds participate. California ranks 36th in the nation for 3-year-old participation and 27th for 4-year-olds.

While pre-school programs provide an important foundation for learning, high-quality full-day kindergarten is also a key building block in ensuring that students get off to a strong start. California is one of 37 states without a statute requiring students to attend kindergarten.

- *The Renewing Our Schools, Securing Our Future Task Force calls for all 3- and 4-year-olds, beginning with low-income and minority children who need it most, to have access to universal high-quality pre-kindergarten and full-day kindergarten paid for with a combination of federal, state, local, and private dollars.*

The High-School-to-College Pipeline

Giving older students more learning time by extending their educational careers to routinely include postsecondary studies also builds a strong foundation for learning. Today, a high-school diploma is no longer sufficient to gain access to the American dream; a college degree or post-secondary vocational credential is essential. Students must leave high school with the academic skills and financial ability to make higher education a reality for them. The first step in meeting this goal is ensuring that all students complete a rigorous course of study in high school, so that they are adequately prepared for the challenges of college-level coursework. Today, however, the nation falls far short of that goal, as measured by rates of high-school graduation and academic readiness for college.

California
37
Out of 50 states ranked on their high-school graduation rate (1=best, 50=worst)

California
32
Out of 50 states ranked on their high-school graduates' academic readiness for college (1=best, 50=worst)

The nationwide average high-school graduation rate stands at 71%, and only 34% of all high-school freshmen are academically ready for college four years later.^{ix} In California, the high school graduation rate is 67%; of entering high-school freshmen, only 32% are considered academically ready for college four years later.^x California ranks 37th among all states on its high-school graduation rate and 32nd among the 50 states in academic readiness for college.

As in many other states, large cracks pervade the education pipeline from high-school enrollment to college completion. Many students drop off along the way. In California, only 48% of high-school graduates enroll in college the following fall. Six years later, only 50% of those California college freshmen will have earned a bachelor's degree. The national average college enrollment rate for graduating high-school seniors is 57%,^{xi} and the

California
44
Out of 50 states ranked on the college enrollment rate of their high-school graduates (1=best, 50= worst)

California
29
Out of 50 states ranked on their college graduation rate among enrollees (1=best, 50=worst)

college graduation rate six years after initial enrollment is 54% nationwide.^{xii} California ranks 44th for immediate college enrollment among high-school graduates and 29th for the subsequent graduation rates of those who do enroll.

- *The Renewing Our Schools, Securing Our Future Task Force calls for policymakers and educators to undertake the radical redesign of high schools and their relationship with post-secondary institutions, assure that every student is prepared for college, and work aggressively to redirect school dropouts back into learning environments that lead to an employment credential.*

Accessibility of Higher Education

The cost of college plays a major role in students' decision of whether to enroll and also influences whether they are able to complete their degree. Soaring tuition costs and stagnant financial aid packages present significant barriers to young people hoping to join the ranks of the college-

<p><u>California</u></p> <p>36</p> <p>Out of 50 states ranked on the share of average family income required to pay for expenses at a community college after financial aid (1=best, 50= worst)</p>
--

<p><u>California</u></p> <p>39</p> <p>Out of 50 states ranked on the share of average family income required to pay for average in-state expenses at a four-year public university (1=best, 50= worst)</p>

<p><u>California</u></p> <p>1</p> <p>Out of 48 states and the District of Columbia ranked on need-based grants as a share of the state's total grants to university students (1=best, 49=worst)</p>
--

educated. Last year alone, the average cost of tuition, fees, room and board at a four-year public university grew by 7.8%, to reach an average of \$11,354.^{xiii} In California, 25% percent of the average annual family income is needed to pay for one year of community college expenses after subtracting financial aid. At a four-year public university, 32% of the average income is required, even after accounting for financial aid. California ranks 36th among the 50 states for community college affordability and 39th among all states for affordability at four-year public universities.

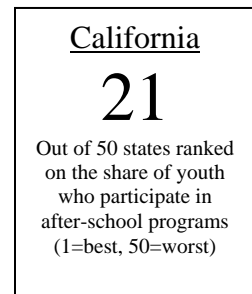
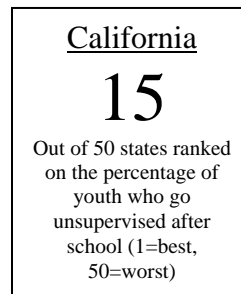
At the same time, not enough students are receiving the financial aid needed to alleviate the painful effects of rising tuition. The federal Pell Grant, which was established to help provide equal access to college for low-income students, has remained stagnant over the last several years, and now covers only 36% of the national average cost of tuition, fees, room and board at a four-year public college – down from 50% twenty years ago.^{xiv} State aid to college students, on the other hand is increasingly based on merit rather than students' financial need. 100% of grants to college students are need-based in California. The state ranks 1st among the 48 states and the District of Columbia for which data were available on this measure.

- *The Renewing Our Schools, Securing Our Future Task Force calls for college to be made financially accessible to all students and for greater incentives to be provided to encourage young people to study in the fields of science and technology.*

Participation in After-school Opportunities

Extending learning time across children’s lifespan from birth to postsecondary education is important. But it is also critical to reexamine how time is used, or not used, within the current K-12 system. One opportunity for using time more effectively lies with the after-school hours. For most American students, school accounts for only about a fifth of the day.^{xv} When they are not in the classroom, some youth have the opportunity to participate in a myriad of after-school programs run by their public or private schools, YM/YWCAs, religious groups, Boys and Girls clubs, and other organizations. Participants benefit from the mentorship, academic support, and social or athletic opportunities that such programming provides. In addition, a structured activity may reduce involvement in substance abuse, crime, violence, and other dangers children may face if left unsupervised. These activities are particularly important given the growing number of families in which both parents work outside the home.

Too few children, however, have access to these opportunities. Nationwide, 25% of K-12 students go unsupervised after school, while 11% participate in after-school programs.^{xvi} In California, 22% of youth go unsupervised after school. Only 12% participate in after-school programs. Compared to other states, California ranks 15th in the percent of unsupervised youth after school and ranks 21st in the share of youth who participate in after-school programs.



- *The Renewing Our Schools, Securing Our Future Task Force calls for states to constructively align school time with student learning and provide incentives for all school districts to better use the current school day, extend the school day, and reorganize the school year with short intersession breaks that offer voluntary tutoring or enrichment programs. In continually low-performing school districts, states should provide an extra 30 days of schooling. The federal government should help fund extra learning time in these districts and provide technical assistance, materials and personnel to help educators transition to these organizational improvements.*

Standards and Student Performance Measurement

Today, under NCLB, states set their own curriculum standards. The law also leaves it up to states to adopt their own standards-aligned tests for measuring students’ skills. Then each state decides what scores students need in order to be deemed proficient. As a result, knowing how to read and do math well, and determining whether students can actually do so, does not mean the same thing in Texas as in Missouri.

Some states have chosen to set high expectations of their students, while others have set the bar low. And because there is no direct and easy way of determining which route states have chosen, parents are left in the dark about whether their children are truly getting a world-class education.

One way, however, to determine whether state curricula and accountability systems are aligned with national measures is to compare the percent of students achieving proficiency on state exams with the percent of students in the same state scoring at proficient levels on the NAEP exam, known as the nation’s report card.

Among 4th graders in California, for example, 39% of students achieved proficiency on the state reading test, while only 21% scored proficient on the NAEP reading exam. This 18-percentage-point disparity means that California ranked 6th among the 50 states on this measure. In math, 45% of California 4th graders scored at or above the proficient level on the state exam, compared to 25% who did so on the NAEP. With a 20-percentage-point difference in proficiency rates, California ranked 11th among the 50 states. The average gap among all states between proficiency rates on the NAEP and the state test was 37 percentage points in reading and 32 in math.^{xvii}

California
6
Out of 50 states ranked on the difference between the share of 4th graders rated proficient on the state reading test, compared to the NAEP test (1= best, 50= worst)

California
11
Out of 50 states ranked on the difference between the share of 4th graders rated proficient on the state math test, compared to the NAEP test (1= best, 50= worst)

The gap can also be observed in 8th grade students. In California, 30% of 8th graders scored at or above proficiency on the state reading test, while 22% did so on the NAEP. The 8-percentage-point gap was 5th among the 47 states with data available on this measure. In math, 30% of California 8th graders achieved proficiency on the state test. 22% did so on the NAEP. This 8-percentage-point gap ranked 11th among the 47 states with data available. The average gap among all states between proficiency rates on the NAEP and the state test was 31 percentage-points in reading and 24 in math.^{xviii}

California
5
Out of 47 states ranked on the difference between the share of 8th graders rated proficient on the state reading test, compared to the NAEP test (1= best, 47= worst)

California
11
Out of 47 states ranked on the difference between the share of 8th graders rated proficient on the state math test, compared to the NAEP test (1= best, 47= worst)

- *The Renewing Our Schools, Securing Our Future Task Force calls for the federal government to support the crafting, adoption, and promotion of voluntary, rigorous national curriculum standards in core subject areas. It should also expand national accountability measures and assist low-performing schools and districts. It should initiate a national conversation about not only the importance of standards and accountability but also the need for paying sufficiently and equitably for public schooling.*

Teacher’s Subject-Matter Qualifications

Providing every student with a high-quality education goes beyond strong standards and quality measurements; it requires providing the necessary resources to turn around continually low-performing schools so that all students can meet these standards. Paramount among these resources is access to high-quality teachers.

Teachers matter most in fostering all students’ learning. Dedicated, caring teachers who have deep knowledge of what they teach can help their students master challenging materials and instill in them a lifelong love of learning. The difference that teachers can make in their students lives is well documented. For example, researchers have concluded that students assigned to the most effective teachers three years in a row performed 50 percentage points higher than did their peers who had been assigned to the least effective teachers.^{xix}

Despite the many truly excellent teachers staffing the nation’s classrooms, teacher quality across the board is not what it must be if our nation’s students are to reach their fullest potential. One stumbling block is ensuring that instructors have thorough and up-to-date training in the subjects they teach. Teachers cannot teach what they do not know. Yet, by assigning instructors to teach subjects for which they lack a college major or minor, that is just what they have been asked to do.

This practice, known as out-of-field teaching, is all too common. Nationally, 24% of all core academic classes in middle- and high-schools are taught by out-of-field teachers.^{xx} Out-of-field teaching is even more prevalent in high-poverty schools, as evidenced by the 34% rate of out-of-field teaching in those schools.^{xxi} In California, 27% of middle- and high-school classes in core subjects are taught by instructors lacking at least a college minor in the subject they teach, giving the state a rank of 33rd on this measure. In California’s high-poverty schools, the number is 27%. The state ranks 9th out of 37 states with data available on out-of-field teaching in high-poverty schools.

California
33
Out of 50 states and the District of Columbia ranked on the percentage of secondary school classes in core academic subjects taught by instructors lacking at least a college minor in the subject they teach (1=best, 51=worst)

California
9
Out of 37 states ranked on the percent of secondary school core academic classes in high-poverty schools taught by instructors lacking at least a college minor in the subject they teach (1=best, 37=worst)

The challenge of finding a highly qualified teacher is most acute in some subject areas and schools, especially those located in high-poverty neighborhoods. Some states have attempted to deal with these challenges by offering financial incentives to attract teachers to hard-to-staff schools and in shortage subjects, such as math and science. California has incentives to attract teachers to hard-to-staff schools and subject areas where there are critical shortages..

- *The Renewing Our Schools, Securing Our Future Task Force calls for states and local school districts, with support from federal financial incentives, to restructure and upgrade preparation programs and on-the-job training opportunities for teachers and school leaders; redesign their compensation and career advancement systems to reward effective teachers and school leaders through fair performance measures; hold all school leaders and teachers accountable for adding value to their students’ learning; and guarantee the equitable distribution of high-quality teachers.*

EDUCATION: THE STATE WE'RE IN

The *Renewing Our Schools, Securing Our Future* Task Force recommendations mentioned in this state report card, as well as other recommendations for strengthening America's schools, are addressed in detail in the Task Force's report, titled *Getting Smarter, Becoming Fairer: A Progressive Education Agenda for a Stronger Nation*.

For more information on members of the Task Force, as well as Task Force activities, please visit <http://www.americanprogress.org/schools> or http://www.ourfuture.org/issues_and_campaigns/education/ros_sof.cfm.

ⁱ National Center for Education Statistics, *National Assessment of Educational Progress -- 2003 Mathematics Results*, Available at: <http://nces.ed.gov/nationsreportcard/mathematics/results2003/>

ⁱⁱ National Center for Education Statistics, *National Assessment of Educational Progress -- 2003 Reading Results*, Available at: <http://nces.ed.gov/nationsreportcard/reading/results2003/stateachieve-g4-compare.asp>

ⁱⁱⁱ National Center for Education Statistics, *National Assessment of Educational Progress -- 2003 Mathematics Results*, Available at: <http://nces.ed.gov/nationsreportcard/mathematics/results2003/stateachieve-g4-compare.asp>

^{iv} National Center for Education Statistics, *National Assessment of Educational Progress -- 2003 Reading Results*, Available at: <http://nces.ed.gov/nationsreportcard/reading/results2003/stateachieve-g8-compare.asp>

^v National Center for Education Statistics, *National Assessment of Educational Progress -- 2003 Mathematics Results*, Available at: <http://nces.ed.gov/nationsreportcard/mathematics/results2003/stateachieve-g8-compare.asp>

^{vi} M. Daane, P. Donahue and W. Grigg, *The Nation's Report Card: Reading Highlights 2003* (Washington, DC: National Center for Education Statistics, Nov. 2003). Available at: <http://nces.ed.gov/nationsreportcard/pdf/main2003/2004452.pdf>

^{vii} Ibid.

^{viii} Jay Greene and Marcus A. Winters, *Public High-School Graduation and College Readiness Rates: 1991-2002* (New York, NY: Manhattan Institute for Policy Research, 2005). Available at: http://www.manhattan-institute.org/pdf/ewp_08.pdf

^{ix} Ibid.

^x College readiness was defined in the Greene report cited earlier as having attained a regular high school diploma, completed of a minimum set of course requirements, and being able to read at a basic level.

^{xi} Committee for Economic Development, *Cracks in the Education Pipeline: A Business Leader's Guide to Higher Education Reform* (Washington, DC: Committee for Economic Development, May 2005)

^{xii} Ibid.

^{xiii} Sandy Baum and Kathleen Payea, *Trends in College Pricing 2004* (Washington, DC: College Board, 2004).

Available at: http://www.collegeboard.com/prod_downloads/press/cost04/041264TrendsPricing2004_FINAL.pdf

^{xiv} Calculated from Baum, Sandy and Kathleen Payea, *Trends in College Pricing 2004* (Washington, DC: College Board, 2004) and College Board, *Trends in Student Aid 2004* (Washington, DC: College Board, 2004)

^{xv} Beth Miller, *Critical Hours: After-School Programs and Educational Success*, (Quincy, MA: Nellie Mae Foundation, May 2003). Available at: http://www.nmefdn.org/uimages/documents/Critical_Hours_Summary.pdf

^{xvi} Afterschool Alliance, *America After 3 PM: A Household Survey on Afterschool in America* (Washington, DC: Afterschool Alliance, May 2004).

^{xvii} Skinner, Ronald A., "State of the States," *Education Week*, Jan. 6, 2005. Available at: <http://www.edweek.org/ew/qc/2005/tables/17achieve-t1.html>

^{xviii} Ibid.

^{xix} William L. Sanders and June T. Rivers, "Cumulative and Residual Effects of Teachers on Future Student Academic Achievement," University of Tennessee Value-Added Research and Assessment Center, 1996, p.3.

^{xx} Craig Jerald and Richard Ingersoll, *All Talk, No Action: Putting an End to Out-of-Field Teaching*, (Washington, DC: The Education Trust, Aug. 2002).

^{xxi} Ibid.