

# THE Center for Education Reform



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September 2006

## THE AMERICAN EDUCATION DIET: *Can U.S. Students Survive On Junk Food?*

It has been 23 years since the National Commission on Excellence in Education warned President Reagan and the nation of a “rising tide of mediocrity” in American schools with its report [A Nation at Risk](#). Since then, little has improved. Meanwhile, as the international economy has evolved in the last two decades into what [Thomas Friedman](#) describes as a “flat” world of globally connected entrepreneurs, the nation’s stagnant education system, bogged down by those vested in the status quo, has left new generations of students even more at risk in an increasingly competitive society.

Consider that the U.S. ranks 21<sup>st</sup> out of 29 Organization for Economic Cooperation and Development (OECD) countries in [mathematics scores](#), with nearly one-quarter of students unable to solve the easiest level of questions. As globalization makes increasing inroads on American culture and economy, our students’ tenuous academic standing in the international community takes on a practical urgency. Too many of our students are not making the grade.

Despite tax-payer spending of [\\$11,000 per student](#) on K-12 education (2<sup>nd</sup> most in the world), American businesses and institutions of higher learning dedicate approximately \$16.6 billion each year to [remedial education](#) for millions of high school graduates who still lack basic skills. And the problems of public education have become not just the concern of policy wonks, academics, and employers. The mainstream media, from Oprah and ABC’s 20/20 to major print, radio and TV news desks, acknowledge and scrutinize, in hundreds of reports every year, the dismal state of education across the nation.

The crisis has seeped into the national consciousness and millions are now calling for the education reforms necessary to get students back on the right track. Stricter demands for accountability, the creation of opportunities for parents to opt into better schools, and a widespread review of curriculum, assessments, and teacher performance will all top the list of potential prescriptions for change in the nation’s policy discussions of America’s educational health.



There are many who dismiss the facts about stagnant, and in some cases declining, educational attainment. They argue that Americans have never been better educated because more minority students and traditionally disadvantaged students are college-bound. And there is indeed evidence of progress in the face of pressures to respond. But the fact remains that even among better performing students, proficiency in education is nowhere near saturated. Consider: the nation's most populous state, California, released its latest [test scores](#) in August, and even in Palo Alto, one of the wealthiest communities in America, nearly 25 percent of high school students are not proficient in grade-level material. In average communities, proficiency hovers around 60 percent, meaning fully 40 percent of high-schoolers have not mastered what they need to know in a given grade. And among those who need good schools the most – those from the most at-risk demographics—proficiency is still far less than 50 percent in most conventional education systems.

Americans have become increasingly obsessed with good health. So why is it that so many of our children are given a daily dose of educational junk food? The American Education Diet is in dire need of a serious review and overhaul. What follows is a broad and detailed look at what has led to this diagnosis.

## I. MATH & SCIENCE

*Researchers, scientists, and businessmen alike have recognized that the growing global economy is threatening our nation's economic standing. As the National Academy of Sciences 2006 report [Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future](#) notes, "In a world where advanced knowledge is widespread and low-cost labor readily available, U.S. science and technology advantages have been steadily eroding." That steady erosion is the cumulative effect of years of mediocrity in math and science teaching in our schools. An international comparison of student test scores paints a foreboding picture of the future.*

- In 2003, American students trailed most industrialized nations in math and science scores on [Program for International Student Assessment](#) (PISA) testing. In science, U.S. students ranked "significantly below the OECD average," finishing 19<sup>th</sup> out of 29 nations with a median score of 491. Japan and Finland led all nations with a median of 548. The results were equally alarming for mathematics testing, with U.S. students finishing 21<sup>st</sup> out of 29 countries. Just 10 percent of American students were ranked as "top performers," while Hong Kong/China had more than 30 percent of its students in that category.
- The same study conducted by OECD dispels the myth that the disparities across nations are the result of education spending. It says that the United States has the poorest achievement outcomes per dollar spent on education. In fact, the Czech Republic was one of the top performing nations in the study despite spending one-third the amount per student compared to the United States.
- An overwhelming majority of American students (72 percent) say they get good grades in mathematics. Despite finishing well behind top performing Asian nations, American students were particularly confident in their skills. Just 36 percent of U.S. students said that they agreed with the statement they were "just not good at mathematics." Comparatively, 57 percent of students from Hong Kong and 62 percent of South Korean students agreed with the statement. But for all their confidence, American students have not won over their future professors or employers. [Sixty-five percent of professors and 63 percent of employers](#) said students lack basic math skills.
- In [National Assessment of Education Progress \(NAEP\)](#) math testing, the average score for 13-year-olds increased between 1999 and 2004 by 5 points. However, the average score at age 17 remained stagnant from 1973 to 2004. Those numbers suggest, as many researchers have concluded, that student gains disappear the longer a child is in our current education system.

American students know that they could do more. 71 percent of U.S. students told the [Public Agenda Foundation](#) that they do the bare minimum to get by.

## II. READING

*Reading comprehension is essential to all learning. Unfortunately, American students' reading achievement is steadily declining and the results are being felt both during and beyond the school years.*

- Mean Verbal SAT scores have spiraled downward between 1972 and 2005. The trend continued in [2006](#), when SAT scores experienced their largest single drop in 31 years, with verbal scores falling 5 points over the previous year.
- Just as mathematics achievement dropped the longer students stayed in the system, a gradual decline in knowledge was apparent in [NAEP reading tests](#). Nine-year-olds scored higher in 2004 than in any previous assessment year, but 13-year-old students showed no gain between 1999 and 2004. And again, 17-year-old scores have remained stagnant since the first year the test was administered in 1971.
- The state-by-state numbers show that in the highest-performing states only 43 percent of 8<sup>th</sup>-graders scored at the proficient level on the 2003 NAEP Reading Assessment. Washington, DC bottomed out with only 10 percent of its 8<sup>th</sup>-graders reading at grade level. The average state proficiency rate of 8<sup>th</sup>-graders nationally was just 32 percent, with 17 states educating less than 30 percent of their 8<sup>th</sup>-graders to a proficient level in reading.
- [The Rand Corporation](#) concluded, “Overall, the data show that our nation faces a tremendous challenge to raise the literacy skills of our nation’s adolescents. It is clear that simply mandating standards and assessments is not going to guarantee success. Unless we, as a nation, are prepared to focus attention and resources on this issue, our schools are likely to continue producing students who lack skills and are ill-prepared to deal with the demands of post-secondary education and the workplace. Policymakers, schools, and teachers need to step up and accept the ‘orphaned responsibility’ of teaching students to read to learn. The costs of inattention are very high, both in personal and economic terms.”

Businesses and institutions of higher learning are already feeling the effects of students’ poor literacy:

- Seventy-four percent of professors and 73 percent of employers told [Public Agenda](#) that American students lack basic grammar and spelling skills. Roughly the same percentages said they also lack the ability to write clearly.

However, for literacy and reading comprehension to improve, teachers and schools have to engage students in learning. The number of students saying they [read for fun](#) almost every day has dropped in the last 20 years. During the same time frame, the percentage indicating that they never or hardly ever read for fun has increased. These are attitudes fostered and reinforced by our complacent education system.

### III. LANGUAGE, HISTORY, AND CULTURAL STUDIES

The 1978 report [Strength Through Wisdom](#) called on President Jimmy Carter to change the way the nation learned history, languages, and foreign cultures. The report declared that American schools “graduate a large majority of students whose knowledge and vision stops at the American shoreline.” Unfortunately, American schools—and students—have made little progress since that 1978 report.

- State graduation requirements, which have helped to improve achievement in many subjects, still only require minimal coursework in world history, geography, and political science. In college, fewer than one in ten students enrolls in a foreign language class. That lack of focus on global studies has had a staggering effect on American students. According to research cited in [Education For Global Leadership](#) by the Committee for Economic Development (CED), roughly 85 percent of young Americans could not locate Iraq or Iran on a map and 25 percent of college-bound seniors could not identify the Pacific Ocean. The statistics were not limited to geography. More than 80 percent of New York City 8<sup>th</sup>-graders did not meet state standards in social studies in 2004.
- Surveys of corporations consistently find that businesses are focused outside the U.S. to recruit necessary talent. In a 2002 survey, 16 global corporations complained that American schools did not produce students with global skills. United States companies agreed. The survey found that 30 percent of large U.S. companies “believed they had failed to exploit fully their international business opportunities due to insufficient personnel with international skills.” One respondent to the survey even noted, “If I wanted to recruit people who are both technically skilled and culturally aware, I wouldn’t even waste time looking for them on U.S. college campuses.”
- In 1998, just 23 percent of 4<sup>th</sup>-graders, 22 percent of 8<sup>th</sup>-graders, and 26 percent of 12<sup>th</sup>-graders were at or above the proficient level in [civics testing](#). More than 30 percent of all grades tested didn’t even hit the level of basic knowledge, and just 2 percent of fourth and 8<sup>th</sup>-graders ranked as advanced.
- In 2001, 57 percent of 12<sup>th</sup>-grade students scored below basic level in [history testing](#). Just 10 percent of the 12<sup>th</sup>-grade population scored at or above proficient in history, showing no improvement since the previous test in 1994.

## IV. OVERALL ACHIEVEMENT

*Author and founder of the Core Knowledge Foundation and University of Virginia professor of education E.D. Hirsch has said that American students fall so far behind students internationally because they lack the broad knowledge needed for real comprehension. Without this basic curricular foundation, delivered in a more effective manner than our current education system has demonstrated, all of the well-meaning math, science, language, and history reforms will not change the growing disparity between American students and the rest of the world.*

- American 4<sup>th</sup>-graders finished ninth in international reading tests, significantly behind Sweden, Netherlands, and England, according to [government data](#). Results of the [2003 PISA](#) reading tests are even more troubling, with the United States finishing 15<sup>th</sup> out of 30 countries.
- And more time in or advancement through the system does not improve the outlook. Only 31 percent of the nation's college graduates scored as proficient in English literacy in [2003](#).
- And for large pockets of the population, the outlook is even worse: across the country, major cities are failing spectacularly in their mission to educate children. Some of the largest school systems in America, serving hundreds of thousands of students, are struggling to teach even the most basic skills.
- In [Baltimore](#), only 1.4 percent of the students at one high school passed the state biology exam. Another Baltimore high school had just 10 percent passing the algebra exam. Northwestern High, a school targeted for takeover under NCLB, had an 8.8 percent pass rate on the state algebra exam; nevertheless, the school conferred diplomas on 78 percent of its seniors in 2005. These and other schools in the city have failed to show improvement for more than 9 years.
- In Los Angeles Unified School District, [2006 testing](#) showed that just 31 percent of students scored at or above grade level in math and only 30 percent of kids are at or above grade level in English.

## V. MONEY & TIME

*The deficiencies seen in student achievement—even in the most fundamental elements of learning—imply deeply entrenched problems with the American education system. As politicians, researchers, and policy makers argue over ways to fix our ailing system, two issues continually come to the fore.*

- Between [1990 and 2005](#), federal, state, and local education spending for grades K-12 has more than doubled from \$248.9 billion to \$538 billion. In that same time period SAT scores have remained flat. Results are similar with spending on teacher salaries. According to [Education at a Glance: OECD Indicators 2005](#), American teachers have the 6<sup>th</sup>-highest salaries in the world, but their students have the 6<sup>th</sup>-lowest achievement in the world.
- [Education at a Glance: OECD Indicators 2005](#) also found that the United States leads the world in the number of instructional hours per school year, with teachers spending an average of 1,000 hours per year on classroom work. However, more time in does not seem to be turning out better educated students.
- And while some parents in the United States complain that their children receive too much homework, students from other countries might disagree. A report by the [Brown Center](#) found that the typical American high school student does not spend more than an hour per day on homework. The report noted that, “of 20 nations, the U.S. ranked near the bottom, tied for the next-to-last position [for time spent doing homework]. Students in France, Italy, Russia, and South America reported spending at least twice as much time on homework as American students.”

## VI. DROPOUT RATES & THE ACHIEVEMENT GAP

*Recent studies on American education have sent shockwaves through poor and minority communities, where the achievement gap between white and minority students has grown to alarming proportions and dropout rates are at an all-time high. “Individuals with a high school diploma live longer, have better indicators of general health, and are less likely to use publicly financed health-insurance programs than high school dropouts,” according to information from [Columbia University](#). For many inner-city and minority kids, the battle against the education bureaucracy is a fight for their life.*

- An estimated 1.2 million teenagers failed to earn a high school diploma in 2005. Among all public school students in the class of 2002-03, the average freshman [graduation rate](#) was 73.9 percent. The worst graduation rate belonged to Washington, D.C. (59 percent), but ten states had graduation rates below 70 percent: Alaska, Florida, Alabama, Louisiana, Tennessee, New Mexico, Mississippi, New York, Georgia, and South Carolina.
- The [Manhattan Institute](#) found that the national high school graduation rate for all public school students remained flat over the last decade, going from 72 percent in 1991 to 71 percent in 2002.

For inner-city and minority students in American, the prospects are even more grim.

- While the graduation statistics are alarming for the entire nation, “the graduation rates are far worse for members of most minority groups. For the 2002-03 school year, the most recent year for which data are available, only 51.6 percent of black students, 47.4 percent of American Indian and Alaskan students, and 55.6 percent of Hispanic students graduated from high school on time with a standard diploma,” according to [Education Week](#).
- The same [Manhattan Institute report](#) also found a large difference among racial and ethnic groups in the percentage of public high school students who leave high school eligible for college admission: about 40% of white students, compared with 23 percent of African-American students, and 20 percent of Hispanic students.
- The [2002 National Opinion Poll on Education](#) found that African-Americans were far more critical of their local schools than other racial groups. In 2002, 35.2 percent of African-Americans rated their school as excellent compared to 53.7 percent of the general population.
- Nearly 50 percent of teachers in mainly minority schools - and 29 percent in mainly white schools - say a high school diploma is not a guarantee that a student has learned basic skills.

There is hope: [International mathematics assessments](#) in 2003 revealed some good news—African-American test scores rose 15 points.

## VII. GRADE INFLATION

*Since No Child Left Behind was enacted in January of 2002, the increase in accountability for schools, teachers, and student achievement has helped to bring a level of transparency to education that had previously been lacking. Those state tests now help the public see every year where schools are most in need of improvement. But individually, students still suffer from poor instruction and inconsistent standards. Too often teachers' low expectations for students result in inflated grades for work that is in fact sub par, leaving students woefully, and unknowingly, unprepared for life after high school.*

- A damning story of grade inflation was portrayed recently on *Oprah*, which profiled Beth, a rural Tennessee valedictorian, who upon arriving at college was in tears over how little she knew. "I had never been taught how to use a microscope," she told the show. "When I came into pre-calculus, I was completely left behind. I had to go back and learn things that I should have already known from high school." Now a college sophomore, Beth is a full year behind in science and math. "I did everything that I could to prepare myself for college, and it still wasn't enough," she said. "I don't feel smart at all in college...I feel like I'm stupid." Unfortunately, her story is not the rare exception.
- In the [last 15 years](#), the percentage of SAT takers defining themselves as "A" students has risen from 28 percent to 42 percent. Today, 89 percent of all SAT takers define themselves as "A" or "B" students. However, in the same time period, SAT scores among the "better" students have dropped.
- Approximately 60 percent of all employers [polled](#) believe their employees' skills did not meet current job requirements very well. That number rises to 69 percent when looking forward two years.
- In 2000, 28 percent of all freshmen entering a degree-granting institution required remedial coursework in reading, writing, or mathematics. In other words, 2.4 million American students graduate from high school without necessary skills in the 3 R's (reading, 'riting, and 'rithmetic).
- Seventy-five percent of colleges have to offer remedial education. Fully 22 percent of students need math remediation in their first year. Stanley Fish, dean emeritus at the University of Illinois at Chicago, teaches writing. Each year he inherits students who start out ill equipped. He laments:

*"We are at that time of year when millions of American college and high school students will stride across the stage, take diploma in hand and set out to the wider world, most of them utterly unable to write a clear and coherent English sentence. How is this possible? The answer is simple and even obvious: students can't write clean English sentences because they are not being taught what sentences are."*

## VIII. TEACHERS

Research dating back to the 1966 release of [Equality of Educational Opportunity](#) (the "Coleman Report") shows that among the various influences that schools and policy-makers can control, teacher quality was found to account for a larger portion of the variation in student test scores than all other characteristics of a school outside of student demographics.

- Researchers at the [University of Tennessee](#) have found that the effectiveness of teachers has more of an influence on student achievement than any other schooling factor. The report found that the least effective teachers elicited average student gains of roughly 14 percentile points a year, while the most effective teachers elicited an average gain of 52 percentile points a year. The effects of teacher quality were also found to persist for years after a student had a particular teacher.

Unfortunately, our students are not guaranteed talented and honest teachers. A study of Chicago testing and scores revealed widespread "cheating" in classrooms, according to the bestselling book [Freakonomics](#). Economist Steven D. Levitt and journalist Stephen J. Dubner analyzed 700,000 Chicago Public School test scores from 1993 to 2000:

- "An analysis of the entire Chicago data reveals evidence of teacher cheating in more than two hundred classrooms per year, roughly 5 percent of the total. This is a conservative estimate, since the algorithm was able to identify only the most egregious form of cheating—in which teachers systematically changed students' answers—and not the many subtler ways a teacher might cheat."
- "In a recent study among North Carolina schoolteachers, some 35 percent of the respondents said they had witnessed their colleagues cheating in some fashion, whether giving students extra time, suggesting answers, or manually changing students' answers."

While ineffective school systems are much to blame for the dismal results, it is often struggling teachers, fearing reprimand for poor student achievement, that inflate their students' grades and push them on to the next grade level without the knowledge they need to succeed. Poor achievement and grade inflation is exacerbated by a growing number of [teachers without qualifications](#) in the subjects they are teaching.

- In 2004, over half of those teaching physical science classes (chemistry, physics, earth, or space sciences) are without a major or minor in any of the physical sciences.
- More than 30 percent of public school math teachers did not major or minor in mathematics in college.
- In high poverty schools, nearly 70 percent of science teachers were without a major or minor in science.

Despite the incompetence of many teachers and the egregious behavior of some, the unions make it nearly impossible to fire bad teachers. In New York over the last two years, only two teachers out of 80,000 cases have been fired for incompetence, according to ABC's recent 20/20 report "Stupid in America."

## IX. PUBLIC AWARENESS AND OPINION

*Students and parents know more about educational achievement than most in academia or the media acknowledge. “Even at a young age, these middle and high school students seem to sense that the schools they attend do not serve them well,” reports Public Agenda in [Reality Check 2006](#).*

- It has also [found](#) that 51 percent of African Americans, 48 percent of Hispanics, 44 percent of Asians, and 39 percent of Caucasians who attended college said that high school teachers and classes should have done more to prepare them for college-level work.
- Additionally, of those surveyed by Public Agenda, 47 percent of young adults who have a degree and 54 percent who do not have a degree said their high school teachers made it easy to do just enough to get by.
- Students are not willing to accept the current education system. They want more. In fact, 84 percent of African American, 84 percent of Hispanic, and 79 percent of Caucasian students think it is a good idea for schools to require them to meet higher academic standards or go to summer school to catch up, Public Agenda found.

## X. CONCLUSION

These disturbing trends in American educational achievement, juxtaposed against too few—but heartening—exceptions, affirm the need for education reform and its potential for improving students’ learning and prospects. Throughout the public school system, from earliest elementary to higher education, we see a dire lack of standards about which the system seems to have become complacent.

American public schools are cracking down on sugary drinks and junk food in school cafeterias. Now it’s time the schools stop pedaling a junk food curriculum and provide our intellectually starved students with the rigorous academic preparation they need to compete with the rest of the world.

*Jon Hussey & Jeanne Allen  
The Center for Education Reform, September 2006*

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