



# Straight A's

Public Education Policy And Progress



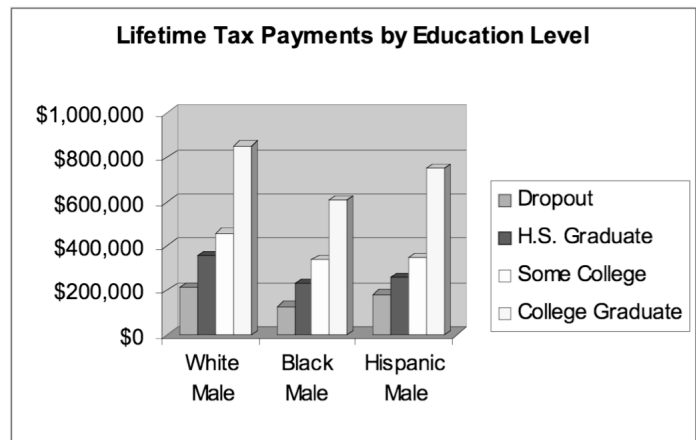
## **THE COSTS AND BENEFITS OF AN EXCELLENT EDUCATION: U.S. Could Net \$45 Billion Annually if One Year's Worth of High School Dropouts Were Cut in Half, According to Leading Researchers in Education and Economics**

U.S. taxpayers could reap \$45 billion if the nation were to cut one year's worth of high school dropouts in half, according to a new study conducted by a group of the nation's leading researchers in education and economics. According to the study, *The Costs and Benefits of an Excellent Education for All of America's Children*, it would take an overall investment of \$82,000 per student for educational interventions and additional years of school attendance leading to graduation, but that amount would result in a public benefit of \$209,000 in higher government revenues and lower government spending. In total, the authors of the report identified a net economic benefit of \$127,000 for each additional high school graduate, a benefit 2.5 times greater than the initial investment.

“High school graduation is associated with higher incomes, better health, lower criminal activity, and lower welfare receipt,” the report states. “This has private benefits, but it also produces significant public benefits. When we calculate these benefits in a consistent form, their magnitudes are substantial.” The study was conducted by **Henry Levin, William Heard Kilpatrick Professor of Economics and Education at Teachers College; Clive Belfield, assistant professor of economics and education at Queens College, City University of New York; Peter Muennig, M.D., assistant professor at Columbia University's Mailman School of Public Health; and Cecilia Rouse, Theodore A. Wells '29 Professor of Economics at Princeton University.**

### **Increased Tax Revenue Only the Beginning**

According to the report, male high school graduates earn \$117,000–\$322,000 more over the courses of their lifetimes than dropouts, while college graduates earn \$950,000–\$1,387,000 more. Given these higher salaries, individuals with a high school education and beyond pay considerably more in taxes. As the table to the right indicates, male dropouts pay approximately \$200,000 in taxes over the courses of their lifetimes while high school graduates pay an additional \$76,000–\$153,000 and college graduates pay an extra \$503,000–\$674,000.



### ***The Costs and Benefits of an Excellent Education*** (Continued from p. 1)

The report notes that, in addition to paying higher taxes, high school graduates also have better health and lower rates of mortality than high school dropouts. Individuals with higher educational attainment also are less likely to use public social services such as Medicaid. In fact, the report states that roughly 25 percent of high school dropouts are enrolled in Medicaid, compared to 8 percent of high school graduates, and 1 percent of college graduates. Using these enrollment figures, the report's authors estimate that a white female who drops out of high school will receive an average of \$60,800 in Medicaid or Medicare payments or services over her lifetime up to age sixty-five. On the other hand, a white female high school graduate will receive less than half that amount (\$23,200), and a white female college graduate will only receive \$3,600.

The report also states that increasing the number of high school graduates significantly decreases crime. It notes that dropouts make up over 50 percent of the state prison inmate population even though they constitute less than 20 percent of the nation's overall population. The report notes that, in total, the criminal justice system saves an average of \$26,600 on each new high school graduate. Most of the savings are from lower incarceration costs, but there are substantial savings from lower criminal justice system costs as well.

When examining the anticipated savings on welfare payments, the report's authors note that the federal government spends \$168 billion annually and state governments spend \$25 billion annually on programs such as cash aid, food benefits, housing aid, training, and energy aid. To determine savings associated with increased education, they examine three programs: Temporary Assistance for Needy Families (TANF), housing assistance, and food stamps. They find that a high school graduate is 40 percent less likely to use TANF, 1 percent less likely to need housing assistance, and 19 percent less likely to use food stamps. Overall, the authors estimate a savings of \$3,000 per new high school graduate over the course of his or her lifetime.

By adding the benefit per graduate from higher taxes, improved health, less crime, and fewer welfare payments, the authors estimate a public benefit of \$209,000 in higher government revenues and lower government spending for each additional high school graduate. In order to determine the total public benefit, they multiplied the benefit per graduate of \$209,000 by 700,000—the number of twenty-year-olds in 2005 who had a ninth- to eleventh-grade education and GEDs. “These persons are at the margin of high school graduation and would likely be most positively impacted by educational interventions that would help them complete high school,” the report reads. In total, the report's authors find additional tax revenues and increased savings of approximately \$148 billion.

### **Is the Investment Worthwhile?**

Unlike similar studies that only project the savings associated with higher graduation rates, this report contains an analysis examining the project financial cost of graduating more students. “Do the benefits to society of investing in an educational strategy outweigh the costs?,” it reads.

Before answering this question, the report's authors identify five interventions that have proven track records in graduating more students from high school. Two interventions take place in preschool (the Perry Preschool program and the Chicago Child-Parent Center program), one

occurs in elementary school (class size reduction), one in high school (First Things First), and one throughout the K–12 years (a 10 percent increase in teacher salaries for grades K–12). The authors then run a cost-benefit analysis for each intervention in order to determine the amount needed to produce one additional high school graduate (represented by “costs” in the table below) and the benefits that each additional graduate would bring to the nation (“benefits”). As shown in the table below, the benefits easily exceed the costs for each intervention, resulting in net present values for each intervention of between \$65,500 and \$150,000.

	Interventions to raise high school graduation rates				
Per additional expected high school graduate	First Things First	Chicago Parent-Child Center	Teacher Salary Increase	Perry Preschool	Class Size Reduction
Costs (C)	\$59,100	\$67,700	\$82,000	\$90,700	\$143,600
Benefits (B)	\$209,100	\$209,100	\$209,100	\$209,100	\$209,100
<b>Net Present Value (B-C)</b>	<b>\$150,000</b>	<b>\$141,400</b>	<b>\$127,100</b>	<b>\$118,400</b>	<b>\$65,500</b>

After calculating the total benefit of \$148 billion (the \$209,000 benefit for each additional graduate multiplied by 700,000 twenty-year-olds) and taking into account the costs listed above, the authors conclude that the nation would save approximately \$45 billion if it could cut the number of dropouts in half. This figure is only for one year’s worth of dropouts and does not include private benefits such as higher salaries that flow directly to the individual.

“What makes this study so powerful is that it has been conducted by economists of the first rank, using sophisticated approaches that, if anything, understate the potential value of investing up front in education,” said **Bob Wise, president of the Alliance for Excellent Education and former governor of West Virginia**. “At a time when Congress is reevaluating the effectiveness of the federal No Child Left Behind Act, it provides lawmakers with a valuable tool to make the case that schools must be given more capacity to improve the achievement of their students.”

Support for the study, which was published by Teachers College, was provided by Lilo and Gerry Leeds, who also cofounded the Alliance for Excellent Education.

The complete report is available at <http://www.cbese.org/pages/cost-benefit-studies.php>.



**HIDDEN BENEFITS: Alliance Calculates that the U.S. Economy Could See \$74 Billion in Wealth Accumulation by Raising the High School Graduation Rate**

If the high school dropouts who currently head households in the United States had earned their diplomas, the U.S. economy would have benefited from an additional \$74 billion in wealth accumulated by families, according to conservative calculations by the Alliance for Excellent Education that are reported in its new brief, *Hidden Benefits: The Impact of High School Graduation on Household Wealth*, funded by MetLife Foundation.

In a previous analysis, the Alliance has highlighted the earnings gap between high school graduates and dropouts. This brief, however, focuses on household wealth, which is defined as the accumulation of investments that appreciate over time. Some examples include cash investments (savings, 401(k) accounts), material possessions that hold monetary value (cars, small businesses), and investments in nontangible property such as degrees.

***Hidden Benefits*** (Continued from p. 3)

As the brief notes, wealth is critical to the economic well-being of individuals and families—even more so than higher earnings. Not only can wealth cushion the impact from sudden unemployment, disabling medical situations, or any kinds of financial emergencies, but it also confers other advantages that make further wealth generation more likely, such as the ability to buy a house in a desirable neighborhood or to start a business. Perhaps most importantly, wealth offers the capacity to improve financial prospects for one’s children and grandchildren.

In order to determine the impact on the nation’s collective wealth if every head of household graduated from high school, the Alliance used research by **Elena Gouskova and Frank Stafford of the University of Michigan Institute for Social Research**, which found that, on average, a household headed by a high school graduate accumulates *ten times* more wealth than a household headed by a high school dropout. In other words, for every \$500 of wealth that households headed by a high school dropout have, their peers with diplomas have accumulated approximately \$5,000. This research, combined with data from the U.S. Census Bureau, allowed the Alliance to calculate the additional household financial wealth that would be gained by each state if every household were headed by someone with at least a high school diploma. The gains in wealth vary across states, from \$83.6 million in Wyoming to over \$9.2 billion in California.

“Wealth inequality between the ‘haves’ and ‘have nots’ and between African Americans and Hispanics and their white counterparts is increasing,” said **Bob Wise, president of the Alliance for Excellent Education and former governor of West Virginia**. “Policymakers are concerned with reducing poverty and want to help poor Americans and members of racial minorities build the assets they need for true financial security. Congress and the administration need to recognize that targeted and effective investments in secondary school reform that will graduate more students each year are a key strategy for addressing these concerns.”

The complete brief, which includes breakdowns for every state, is available at <http://www.all4ed.org/publications/hiddenbenefits.pdf>.



**TWELFTH-GRADE NAEP MATH AND READING SCORES FINALLY RELEASED: 2005 Average Reading Score is a Disappointing Six Points Lower than 1992 Score**

Initially expected in fall 2006, the twelfth-grade results from the 2005 National Assessment of Educational Progress (NAEP) in reading and math were finally released on February 22. The average reading score was 286 on a 500-point scale, one point lower than in 2002 when the test was last administered, and six points lower than 1992. The average math score was 150 on a 300-point scale; however, because of changes to the test’s framework, current scores could not be compared to those from previous years.

According to the results, 27 percent of all 2005 twelfth graders in public schools read “below basic,” meaning that they were unable to understand or to make interpretations about the provided text. This percentage was one point higher than in 2002, and seven points higher than in

1992, when only 20 percent of twelfth graders performed the below basic level. The results were even more disheartening for math, in which 39 percent of all twelfth graders performed below basic.

“High school commencement was right around the corner for the students who took these tests in 2005,” said Bob Wise, president of the Alliance for Excellent Education and former governor of West Virginia. “The fact that so many students who walked across the stage on graduation day lacked the most basic skills in reading or math should concern every citizen.”

The report also demonstrated the large achievement gaps that continue to exist between white students and their African-American and Hispanic classmates. For example, the report shows a twenty-six-point gap in reading between white students, who scored 293, and their African-American classmates, who scored 267. The average Hispanic reading score (272) was twenty-one points lower than the average white score, while the average American Indian/Alaska Native score (279) was fourteen points lower, and the average Asian/Pacific Islander score was 287, six points lower.

The percentage of students scoring at or above the proficient (grade level) fell from 40 percent in 1992 to 35 percent in 2005. In math, only 25 percent performed at or above the proficient level.

“With 65 percent of the nation’s high school seniors reading below grade level, and 77 percent performing below grade level in math, it is obvious that the United States is failing to teach its older students the basic skills they need to succeed in the competitive global economy of the twenty-first century,” Wise said. Mentioning that these students will need additional training to learn what they should have learned in high school, he said that “rather than spending billions each year on remediation, the nation should invest in improving the literacy and math skills of middle and high school students, while it continues to support these efforts in the early grades.”

The overall decline in twelfth grade reading and math scores since 1992 seems to contradict the findings of the High School Transcript Study, which was released by NAEP on the same day. It reports that the overall grade point average for high school students was a third of a letter grade higher in 2005 than in 1990.

The study also says that high school graduates in 2005 were more likely to have completed at least a standard curriculum—defined as four credits in English and three each in social studies, math, and science—than graduates in 1990. Only 40 percent of 1990 graduates completed at least a standard curriculum, compared to 68 percent of graduates in 2005. However, these numbers also mean that 32 percent—nearly one in three high school graduates—took less than a standard curriculum. At the same time, only 10 percent of 2005 graduates completed a rigorous curriculum, which is defined by NAEP as containing at least one precalculus-or-higher math credit; at least three science credits in biology, chemistry, and physics; and three or more foreign language credits. The percentage of students taking a rigorous curriculum has increased only one point since 1998.

“The two reports released today show that we have our work cut out for us in providing every child in this nation with a quality education,” said **U.S. Secretary of Education Margaret**

## Twelfth-Grade NAEP Math and Reading Scores

(Continued from p. 5)

**Spellings.** “If, in fact, our high school students are taking more challenging courses and earning higher grades, we should be seeing greater gains in test scores.” Spellings also said that President Bush, as part of his drive for No Child Left Behind (NCLB) reauthorization, is pushing for more academically rigorous curricula in U.S. high schools. “Schools must prepare students to succeed in college and the twenty-first-century workforce,” she added.

**David Gordon, superintendent of the Sacramento County (CA) school system,** seconded Spellings’s comments and suggested that, in addition to an achievement gap between certain groups of students, there is also a “rigor gap.”

“There’s a disconnect between what we want and expect our twelfth graders to know and do, and what our schools are actually delivering through instruction in the classroom,” Gordon said. He stated that a course may sound challenging in title but, upon an analysis of the content, it might not be as rigorous as one would assume.

Administered every two years to students in grades four, eight, and twelve, NAEP is the only nationally representative and continuing assessment of American students’ knowledge and skills. As such, the report of the results is also referred to as “The Nation’s Report Card.”

The 2005 NAEP twelfth-grade results and the High School Transcript Study are available at <http://nces.ed.gov/nationsreportcard/>.

### **Facing Uphill Battle to Enlist Soldiers, U.S. Army Turns to High School Dropouts**

According to a recent article on the *Harper’s Magazine* website, the portion of non-high school graduates in the Army’s 2006 enlistment pool was 27.5 percent, an increase of 10 percent over 2005 when the Army fell nearly 7,000 recruits short of its 80,000 goal. That year, the Army decided to relax its standards in an effort to deepen the pool of available recruits. The 2006 enlistment figures are a far cry from those from the 1990s, when only about 5 percent of new Army recruits had failed to earn their high school diplomas.

“Recruits with a criminal history and non-high school grads are far more likely to perform poorly, commit acts of misconduct, and fail to complete their scheduled tours of duty,” the article reads. “Judging from past results, about half of the non-grads will not complete their first four years of active duty, versus an expected ‘attrition’ rate of about one third for high school graduates.”

The article notes that the Army plans to expand significantly over the next five years. **Eli Flyer, a longtime Pentagon consultant on military recruiting,** said that the Army is likely to continue to tap into the pool of non-high school graduates. “About 400,000 people a year get GEDs,” he said, “so you’re talking about a pool of millions. In contrast to high school graduates, who are aggressively courted, most G.E.D.-ers are walk-ins.”

The complete article is available at <http://harpers.org/sb-kerry-was-right-1170945174.html>.



## STATE OF THE STATES: North Carolina Governor Urges Expansion of Early-College High Schools

In his February 19 state of the state address, **North Carolina Governor Mike Easley (D)** identified education as an urgent moral concern central to the state's economic security and pledged to expand its "Learn and Earn" early-college high schools.

"Protecting America means more than just providing for the national defense," he said. "We must protect our economic security, as well. We must be committed to the patriotic duty of providing the knowledge, talent, and skill for our people to compete and win in the world marketplace."

Easley credited "Learn and Earn" high schools, which allow students to earn an associate's degree with just one extra year of study, with increasing graduation rates and helping families save money on college costs. While the state is poised to have seventy-five schools participating by the 2008–2009 school year, the governor considered this progress "good, but not enough." His budget will include support to expand the program throughout the state.

Easley also focused on expanding college access and affordability, while aligning college expectations with high school requirements. He proposed a grant to cover two years of college for low- and middle-income students, in exchange for meeting academic standards and working ten hours a week. He said that this grant would allow many students who successfully completed the "Learn and Earn" program to finish college at a state university and graduate debt-free.

The complete speech is available at <http://www.governor.state.nc.us/StateOfState2007text.doc>.

### **2007 Civic Change Award to Recognize Dropout Prevention Efforts**

The Pew Partnership for Civic Change is accepting applications for its 2007 Civic Change Award until March 31. The award will be presented to an organization or individual who has successfully employed community resources in an effort to address the high school dropout crisis. As examples, the organization lists mentoring programs matching at-risk students with community members, career-oriented programs that work through local businesses to help students recognize the connection between school and work, or initiatives that mobilize community members in an attempt to publicize the serious nature of the dropout problem in local schools.

"If our communities are to thrive and prosper they desperately need their young people to finish school," the award application reads. "Communities with greater numbers of high school graduates are more attractive to businesses and are less burdened by the costs associated with poor health and unemployment. Unfortunately, schools alone cannot change the odds. Entire communities need to recognize the potential dangers of dropping out and work to help students finish their schooling."

More information about the award, including an entry form, is available at <http://www.pew-partnership.org/whatsnew.html>.

***Straight A's: Public Education Policy and Progress*** is a biweekly newsletter that focuses on education news and events both in Washington, DC, and around the country. The format makes information on federal education policy accessible to everyone from elected officials and policymakers to parents and community leaders. The Alliance for Excellent Education is a nonprofit organization working to make it possible for America's secondary school students to achieve high standards.



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