

The Social Costs of Inadequate Education

The first annual
Teachers College Symposium on Educational Equity

Conducted by

The Campaign for Educational Equity

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

on October 24-26, 2005

Sponsored by the Laurie M. Tisch Foundation

A Summary by Symposium Chair

Professor Henry M. Levin

William Heard Kilpatrick Professor of Economics and Education,
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The Price of Inequity

Educational inequity is first and foremost an issue of justice and fairness, but it is also an issue that affects all of us in our daily lives—and will affect our children even more so.

Among the findings presented at the 2005 Teachers College Symposium on The Social Costs of Inadequate Education:

College graduates are **three times more likely to vote** than Americans without a high school degree

Preschool programs create economic benefits—including reduced costs of crime, drug use and teen parenting—that range as high as **\$7 for each dollar** invested

Increasing the high school completion rate by just 1 percent for all men ages 20-60 would **save** the U.S. up to **\$1.4 billion** per year in reduced costs from crime

A high school dropout **earns** about **\$260,000 less** over a lifetime than a high school graduate and pays about \$60,000 less in taxes

Health-related losses for the estimated 600,000 high school dropouts in 2004 totaled at least **\$58 billion**, or nearly \$100,000 per student

Annual losses exceed **\$50 billion** in federal and state income **taxes** for all 23,000,000 U.S. high school dropouts ages 18-67

A one-year increase in average years of schooling for dropouts would **reduce murder** and assault by almost **30 percent**, motor vehicle theft by 20 percent, arson by 13 percent, and burglary and larceny by about 6 percent

A **shortfall** of **7 million** college-educated **workers** in America is projected by 2012

High school dropouts have a **life expectancy** that is **9.2 years shorter** than high school graduates

America **loses** \$192 billion—**1.6% of GDP**—in combined income and tax revenue with each cohort of 18-year-olds who never complete high school

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Implications of Educational Inequality for the Future Workforce

http://devweb.tc.columbia.edu/manager/symposium/Files/70_Bailey_paper.ed.pdf

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The Promise of Early Childhood Education

http://devweb.tc.columbia.edu/manager/symposium/Files/72_Belfield_paper.ed.pdf

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Toward Skilled Parenting and Transformed Schools: Inside a National Movement for Excellence with Equity

http://devweb.tc.columbia.edu/manager/symposium/Files/71_Ferguson_paper.ed.pdf

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The Political Costs of Unequal Education

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Does Education Reduce Participation in Criminal Activities?

http://devweb.tc.columbia.edu/manager/symposium/Files/74_Moretti_Symp.pdf

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Health Returns to Education Interventions

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The Many Dimensions of Racial Inequality

http://devweb.tc.columbia.edu/manager/symposium/Files/83_Rothstein.pdf

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The Labor Market Consequences of an Inadequate Education

http://devweb.tc.columbia.edu/manager/symposium/Files/77_Rouse_paper.pdf

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Diversity and the Demographic Dividend: Achieving Educational Equity in an Aging White Society

http://devweb.tc.columbia.edu/manager/symposium/Files/78_Tienda_paper.ed.pdf

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Public Assistance Programs: How Much Could Be Saved with Improved Education?

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Preface

The inadequate and inequitable opportunities offered to poor and minority youth today are perhaps the greatest challenge facing America's schools and social institutions and pose a major threat to our country. They are a moral threat: In an age when the best jobs require higher levels of skills and knowledge than ever before in history, some children do not have the education to compete for them, simply because of their parents' skin color or income. They are a social threat because inadequately educated children are more likely to be arrested, become pregnant, use drugs, experience violence and require public assistance. They are an economic threat, diminishing the competitiveness of America's current and future workforce. And they are a civic threat, because our children's overall enfranchisement—their personal stake in society—so clearly mirrors their educational level.

The Campaign for Educational Equity at Teachers College, Columbia University was launched in June 2005. From October 24-26, The Campaign held its first annual research Symposium. The focus was "The Social Costs of Inadequate Education"—the enormous economic and civic costs America incurs as a result of chronic inequities that plague its systems of education, health, housing and income distribution. Through research presentations by 12 leading social scientists, the Symposium provided the most accurate portrait to date of the increased costs in crime, compromised health, poor preparation for competitive employment, and lost income and tax revenue that America incurs because of these inadequate institutions. It also characterized damage to the social and civic fabric of the nation—an equally heavy toll that accumulates annually with each cohort of high school dropouts. And it provided a glimpse of a future, only several decades hence, when—if present trends continue—the "minority" groups with the lowest overall levels of education will account for over 50 percent of the U.S. student population.

This comprehensive effort to assess the costs of inadequate education reflects the wide-ranging causes and impacts of educational inequity. And it points to the need for comprehensive solutions. To meet the global economic challenges of an increasingly "flat world;" to prepare students to be capable civic participants in a democratic society; and to ensure that children's racial/ethnic, socioeconomic, or family background no longer so strongly predicts their access to educational opportunity or their ultimate level of achievement, school reform must address the full array of factors that affect students' educational performance.

Several researchers at our Symposium focused on the cost-predictive impact of a single variable: failure to graduate from high school. Certainly other studies and conferences have mined this territory. What distinguished this Symposium was the extent to which certain presenters used this variable to isolate the specific cost impact of inadequate education, as distinct from any associated impact of ethnic background, family wealth, parents' education and other factors.

By comparing graduation rates in states with different compulsory schooling laws, for example, the research presented at our Symposium broke new ground in showing a relationship between high school graduation and reduction in criminal activity. Other researchers demonstrated the direct relationship between having a high school degree and the likelihood of avoiding the need for public assistance. The relationship between high school graduation and improved health, active civic participation and job opportunities were also quantified by other presenters at the Symposium. In addition, the Symposium presented aggregated data on the cost to society when generations of young people contribute reduced tax revenue due to low-level jobs; or rely on public assistance because of lack of marketable job skills; or end up being incarcerated.

The value of these new data on economic costs is particularly relevant at a time when plaintiffs in a growing number of states are winning significant monetary awards in school finance cases. Our findings suggest that an up-front investment in education, even one that costs billions of dollars, can prevent much higher

expenditures later on. The 2002 federal No Child Left Behind Act, with its emphasis on improving the performance of all students, also makes the findings of this Symposium especially timely.

This narrative divides the research presented at the Symposium into five main sections. In Part I, Professor Richard Rothstein and doctoral student Tamara Wilder, both of Teachers College, set the stage by providing an overview of inequities in contemporary American society—not only in education, but also in health, housing and economic security. Their broad focus reflects the reality that in our society, education both mirrors and underlies other inequities; it is both a cause and an effect. To highlight this complex synergy, Rothstein and Wilder exclusively contrast the situation of whites with that of blacks, who contend with both the residual legacy from slavery and current policies that perpetuate economic segregation—a combination that includes glass ceilings and other labor market issues, inferior housing and housing stability, dangerous neighborhoods, less substantial family assets, and poorer health and health care.

Amplifying this portrait of disparities in one slice of the population, Part II of this narrative reports on the nation's rapidly shifting demographics, describing how the demands of the new information economy, coupled with America's underinvestment in education, are laying the ground for economic and civic disaster in the coming decades. Part III specifically looks at education as an independent variable and analyzes its unique impact on the life chances of the individual, and on the economic and civic wellbeing of society. Part IV examines the impact of inadequate education on the civic engagement of young people. Finally, we present the work of researchers who offer potential solutions to remedying the profound social problem of inadequate education. To a large extent, their proposals focus on interventions targeted at the earliest years of life.

Michael A. Rebell
Executive Director
The Campaign for Educational Equity

“Our findings suggest that an up-front investment in education, even one that costs billions of dollars, can prevent much higher expenditures later on.”

Part I: Inequality in America

“We begin this investigation with a focus on black-white inequality because American society’s roots in slavery make this gap of overwhelming moral importance” and “because more complete data are available on black-white than on other inequalities...”

The report by Rothstein and Wilder describes inequalities between blacks and whites in 10 broad domains. These include not only academic achievement and educational attainment, but also early childhood and after-school experience; health; cultural and family life; citizenship; and economic security.

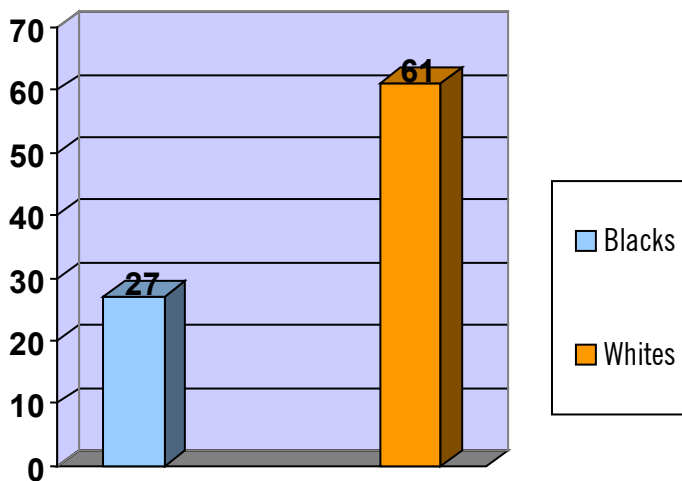
The data the authors present are descriptive and do not imply a causal relationship between any of the various domains. Yet taken together, the findings in each area present a powerful and disturbing picture of the odds against a black child achieving at a level commensurate with his or her white peers.

Education

Within education, Rothstein and Wilder looked at three domains: academic achievement (students’ performance on test scores), school readiness and educational attainment (number of years in school/degrees earned). According to multiple measures across these domains, whites consistently outperform blacks.

At the broadest level, black students (elementary and secondary) on average rank at about the 27th percentile of achievement, as compared to their white peers, who score at the 61st percentile on a national distribution (see Figure 1). That is, in a comparison of all school children in the U.S., the “average” black student ranks at the lower end of academic achievement while the average white student scores in the upper range.

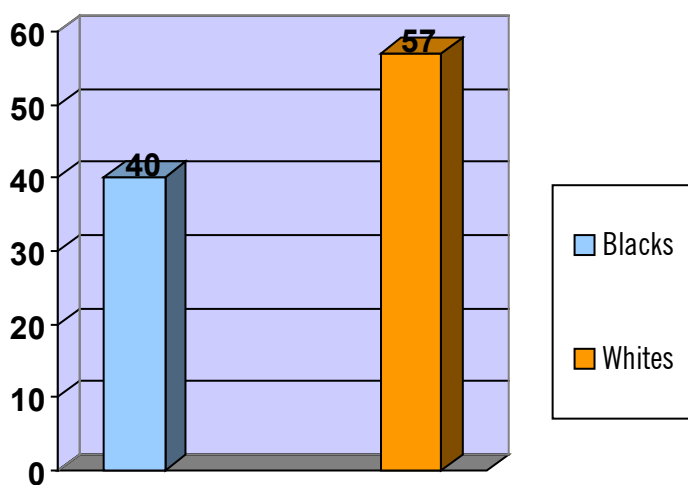
FIGURE 1 BLACK AND WHITE ACADEMIC ACHIEVEMENT



Young white children are more “school-ready” than their black peers. The authors found that on average, black children are at the 40th percentile of school readiness or early childhood preparation, while young white children are at the 57th percentile (see Figure 2).

School readiness measures a child's learning experiences before starting school, which may be a factor in the academic achievement gap (measured by differences in test scores) once elementary school begins. The years prior to kindergarten are formative ones during which there is potential for a great deal of learning and development. A child who is exposed to reading, books, computers and supervised play before he or she starts school is advantaged both academically and socially. These advantages have been shown to persist beyond just the early grades. In addition, inequality during children's school years is further compounded by differences in out-of-school experiences that contribute to school success.

FIGURE 2 BLACK AND WHITE SCHOOL READINESS

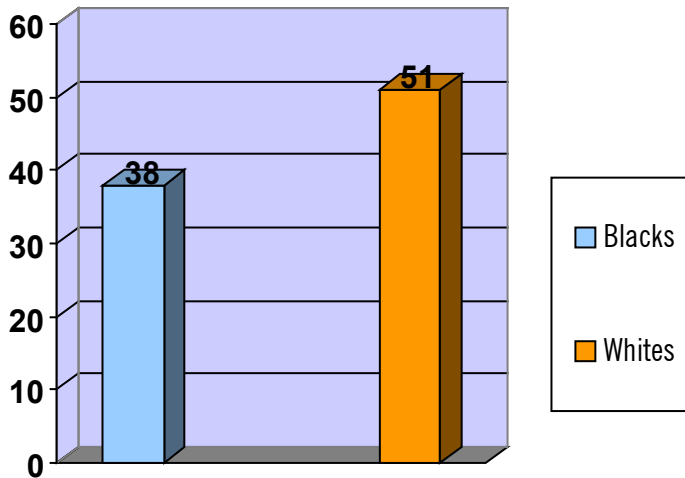


Not surprisingly, the consequences of accumulated inequities in school readiness and *academic achievement* become apparent in *educational attainment*. Based on a number of indicators, Rothstein and Wilder report that on average, black children and young adults score at the 38th percentile in academic attainment while their white counterparts score at the 51st percentile on a national distribution (see Figure 3). The domain “academic attainment” includes indicators such as high school graduation rates, percentage of GEDs awarded, and enrollment and completion of college.

However, the authors maintain that the education attainment gap also grows out of “persistent class and caste differences, including inequalities in health, economic security and employment.”

“A child who is exposed to reading, books, computers and supervised play before he or she starts school is advantaged both academically and socially. These advantages have been shown to persist beyond just the early grades.”

FIGURE 3 BLACK AND WHITE EDUCATIONAL ATTAINMENT

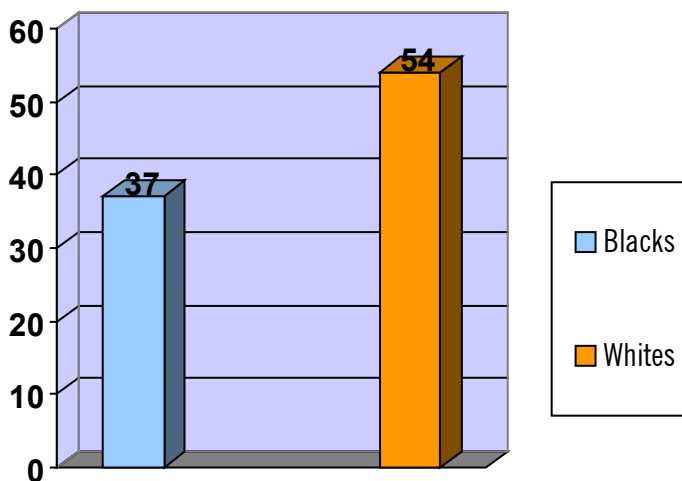


Health

Health inequities come to light shortly after conception; for example, the degree of medical attention during early pregnancy is an especially powerful predictor of various lifetime outcomes. Twenty-five percent of black mothers get no prenatal care during the first trimester, as compared to 11 percent of white mothers. Among black mothers, 6 percent get late prenatal care or no care at all, but only 2 percent of white mothers get no care or care that is too late.

During the first year of life, there are 14 deaths for blacks and 6 for whites per 1,000 live births. Infant morbidity (illness) tends to track with infant mortality, so the higher rate of black infant mortality strongly suggests a similarly higher rate of black infants who survive with health issues that make school and lifetime success more difficult. Adequate prenatal care would probably significantly ameliorate both gaps.

FIGURE 4 HEALTHY PREGNANCY AND INFANCY AMONG BLACKS AND WHITES EDUCATIONAL ATTAINMENT



Racial differences in rates of healthy pregnancies and live births are paralleled by differences in birth weight. Low birth weight (less than 2,500 grams) strongly predicts special education placement, lower academic achievement, emotional maladjustment and likelihood of criminal behavior. Thirteen percent of black babies have low birth weight, versus 7 percent of whites. Among blacks, 3 percent of newborns have very low birth weight (less than 1,500 grams), a red flag for adverse educational and lifetime outcomes. For whites, the rate is only one-third as great.

In summary, Rothstein and Wilder conclude that the average black experience with healthy and successful pregnancy, childbirth, the neonatal period and infancy is at the 37th percentile of the experience of all U.S. mothers and babies, while the average white experience is at the 54th percentile (see Figure 4).

Rothstein and Wilder also looked at children's access to health care and found that among children under 18, 14 percent of blacks lack health insurance, including Medicaid or CHIP (federally subsidized children's insurance). Among whites in this age group, only 7 percent lack coverage. Black children are thus less likely to get primary and preventive medical care than whites. Although 87 percent of black children (under 18) have seen a doctor in the previous year, compared to 90 percent of whites, this relatively small disparity does not reflect the much larger disparities in the average number of doctor visits, or in the type of medical facility visited. These larger disparities exist between blacks and whites at all income levels.

Among preschool-aged children, blacks also are likelier than whites to have a range of health problems. Rothstein and Wilder found that black children get less adequate nutrition (defined in terms of essential nutrients). For example, iron deficiency anemia, which adversely affects cognitive ability and predicts special education placement and school failure, is more prevalent among black children. Iron deficiency anemia also predisposes children to lead absorption, which further depresses cognitive ability. In federal programs for low-income children, 19 percent of blacks under the age of five are anemic, versus 10 percent of whites. Furthermore, black children are more likely to have vision problems, including not only near- or far-sightedness, but also poor eye muscle development, which affects such reading-related skills as tracking print, converging and focusing. Optometrists who have tested children in low-income black communities report that as many as 50 percent of children may come to elementary school with vision difficulties that impair reading ability, compared to 25 percent of children in non-poor communities.

The researchers also analyzed black-white health disparities in school-aged children. They report that health inequalities found during the preschool years persist as children move through school, but can take somewhat different forms. Because the environmental conditions in neighborhoods where disadvantaged children reside contain more allergens, minority and low-income children are more likely to suffer from asthma. Seventeen percent of black children suffer from asthma, versus 1 percent of white children. Asthma is generally believed to be the single largest cause of chronic school absenteeism. It keeps children up at night, and, those who do make it to school the next day are more likely to be drowsy and less attentive. Children with asthma refrain from exercise and so are less physically fit. Irritable from sleeplessness, they also have more behavioral problems that depress achievement. Perhaps because of environmental factors, asthma increased for children overall

“Seventeen percent of black children suffer from asthma, versus 1 percent of white children. Asthma is generally believed to be the single largest cause of chronic school absenteeism.”

by 50 percent from 1980 to 1996. Yet it increased twice as rapidly for black children, perhaps partly because their environments are worse, or because diagnosis in this population, which has been poor, is improving.

Economic Security

Finally, Rothstein and Wilder provide data on a broad range of black-white disparities in economic security and adult life experiences, including unemployment, labor market indicators, income (with inequalities actually widening between better educated blacks and whites), household income (the gap has remained nearly constant since 1967) and family assets. “Black and white adults lead unequal lives as well,” the authors note. “As at previous stages of life, these inequalities partly continue the inequalities of earlier stages, and partly they are accelerated.”

Consequences of Black-White Disparities

What are the consequences of all these disparities for the education outcomes of black children? Families with less income have less income to devote to the welfare of children. Families with less financial wealth are less able to save for college. Inequalities in economic security, compounding educational and health inequalities, contribute to differences in the adult lives of blacks and whites in American society. These inequalities cycle back into differences in how black and white adults are able to support and nurture their children, perpetuating inequalities for another generation. In addition, young black adults are less likely than whites to participate fully in civic life and democratic governance, either because they are less prepared for it in their schools and communities, or because they have fewer opportunities for involvement.

“Efforts to eliminate black-white inequality in American society should be mounted across all domains, including schools, but not in schools alone. There is no single policy focus likely, by itself, to make the nation equitable.”

“An underlying inequality... persists across many domains of American society,” the authors conclude. “We draw no specific inferences regarding causality in describing these various domains. It is possible that if policy were directed to reducing inequality in some key domains, for example, health or school readiness, that inequality in other domains would diminish as a consequence. However, we consider it probable that causality runs in many directions: Children with better academic achievement may earn more in less stressful jobs and be in better health as adults. Children with better health may have better school attendance and thus have higher achievement. Parents who earn more may accumulate savings which can be used to send children to college and inspire them to do so. Because causal relationships between these various domains are often multi-directional, it is likely that black-white inequality can be substantially

reduced only by sustained policy attention to many, if not all of these domains simultaneously... Therefore, we return to our conclusion that efforts to eliminate black-white inequality in American society should be mounted across all domains, including schools, but not in schools alone. There is no single policy focus likely, by itself, to make the nation equitable.”

Part II: Demography, Changing Workforce Demands and the Consequences of Under-Investment in Education

“...[T]he most ethnically diverse youth cohorts in U.S. history are coming of age in an aging society...[This] poses formidable social and policy challenges because, on average, the fastest growing cohorts are more likely to have parents with little education and lower incomes than the cohorts they are replacing...[T]he demographic dividend afforded by the modest, but transitory, minority age bulge will be lost if the nation’s investment priorities are diverted away from education.”

Both Professor Marta Tienda of Princeton University and Professor Thomas Bailey of Teachers College, Columbia University make a strong case that America is under-investing in education, and in the country’s most vulnerable young people.

Tienda finds that the four states with the highest percentages of immigrant students—high percentages of whom have special needs—rank among the worst states for high school graduation rates and rates of child poverty. California ranked 32nd, Texas 37th, New York 43rd and Florida 50th in child poverty rates. Yet these three states also rank near the bottom on state per capita education spending—Texas and California at 34th, Florida at 37th.

Bailey argues that America’s under-investment in education is evident in the lack of educational attainment by its workforce compared with that of other leading industrialized nations. Historically, America’s international economic leadership was linked to its enormous lead in educational attainment. Today, at least seven other countries have surpassed the U.S. in the percentage of 25-34 year olds who have completed the equivalent of college. Another five countries are within a couple of percentage points of the U.S. on this measure.

If the experience of blacks, in particular, stands as a reminder of injustice in America’s past, it also warns that the past may be prologue. In her paper, “Diversity and the Demographic Dividend: Achieving Educational Equity in an Aging White Society,” Tienda also makes the strong utilitarian case that, given current ethnic trends, education is, at the very least, a prudent investment. The growing cohort of U.S. schoolchildren (who, as a group, are more diverse than the general population) could be the future workforce that keeps America economically competitive and supports an aging population—or it could be an economic and civic disaster in the making.

“Whether the growing youth population will contribute to economic productivity or become a drag on social resources hinges crucially on policy decisions to bolster educational investments.”

At present, the growth of certain ethnic groups in the student population coincides ominously with widening racial and ethnic inequalities. Tienda reports that:

- In 2000, black and Hispanic students attended segregated schools where two out of three students were poor or near poor; moreover, 88 percent of the students attending hyper-segregated minority schools (i.e., with less than 10 percent whites) were poor, compared with only 15 percent of students attending equally segregated white schools.
- Schools where minorities are disproportionately concentrated show enrollments of poorer students, on average, than predominantly white schools. Graduation rates for central city high schools averaged 58 percent in 2001, compared with 73 percent for suburban schools.
- The annual high school dropout rate of Hispanics remains double that of non-Hispanic whites.
- As of 2000, the Hispanic high school graduation rate was almost three decades behind that of whites. In that year, 59 percent of Hispanics ages 25 and over achieved high school diplomas. Fifty-five percent of whites did so back in 1970.
- Only 10 percent of Hispanics ages 25 and over were college graduates in 2000—roughly comparable to whites in 1970.

According to Tienda, in 2000, just over half of the U.S. population were between the working ages of 25 to 64, but whites outnumbered minorities by a ratio of 3.5:1, whereas at the post-retirement ages, the white-minority ratio was 10:1. Through population aging, the working-age population is projected to fall to 48 percent by 2030, with the white-minority ratio falling to about 2:1.

“Educational inequality in the United States is going to increasingly stand in the way of the ability to sustain productivity growth and to compete successfully in international markets.”

Whether the growing youth population will contribute to economic productivity or become a drag on social resources hinges crucially on policy decisions to bolster educational investments, including broadening access to higher education for under-represented groups and improving educational outcomes based on math and reading scores, high school graduation rates and college graduation.

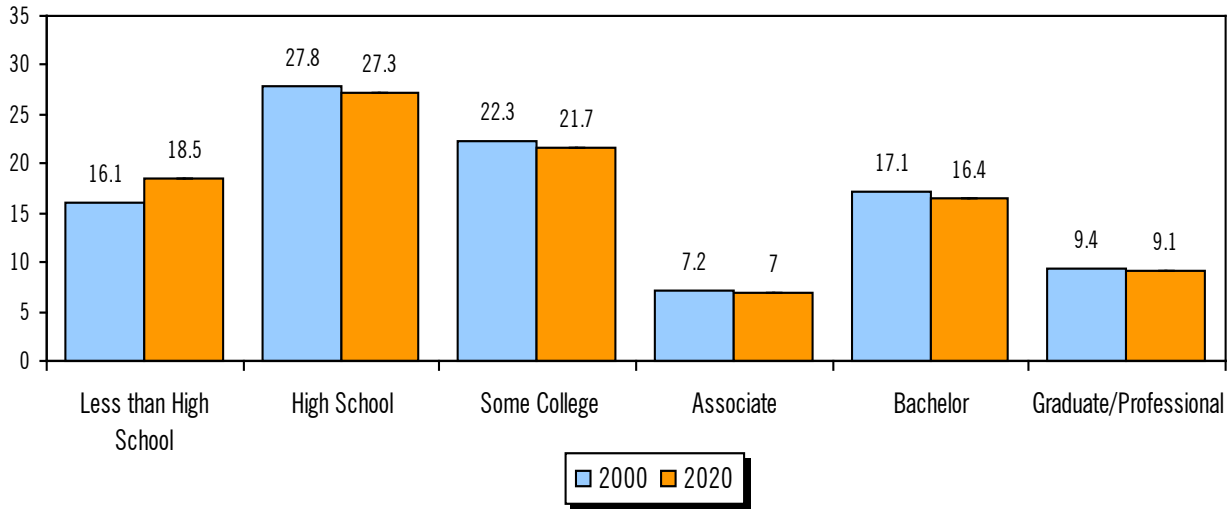
The corollary to the demographic picture painted by Tienda is Professor Thomas Bailey’s analysis of a post-secondary education as a critical prerequisite for the development of highly skilled workers, whom he sees as essential to America’s ability to remain

internationally competitive in the 21st century. “Traditional educational inequality in the United States is going to increasingly stand in the way of the ability to sustain productivity growth and to compete successfully in international markets,” writes Bailey. “In the past, educational inequity was a problem primarily for the individuals who ended up with lower levels of education; increasingly it will be a problem for everyone.”

Bailey reports that black and Hispanic students are less likely than whites to reach the 12th grade; that those who reach the 12th grade are less likely to enroll in college; that those who enroll in college are less likely to earn 10 credits; that those earn 10 credits are less likely to enroll in a B.A.-granting institution; and that those who do enroll in such an institution are less likely to complete a degree. Given these growing gaps, Bailey finds, the demographic trends described by Tienda will make it difficult to increase overall educational attainment in America.

Furthermore, Bailey reports that given current trends—between 2000 and 2020, as the educational attainment of other countries is expected to rise, educational attainment in America will be falling for the first time in history. Specifically, the share of the U.S. population with less than a high school degree is

FIGURE 5 PROJECTED PERCENT CHANGES IN EDUCATIONAL ATTAINMENT IN 25- TO 64-YEAR-OLDS FROM 2000 TO 2020



expected to increase from 16.1 to 18.5 percent (see Figure 5). The population shares of all other educational levels are expected to fall slightly as a result. Thus, unless the educational level of African Americans and Hispanics can be raised over the next 20 years, America—at a time when it needs more workers with the skills provided by a college education—will instead experience a significant growth in the population that has not even graduated from high school.

Bailey further notes that American economic competitiveness today is most vulnerable at the post-secondary level, where it is threatened by a combination of racial and economic educational inequities, declining educational quality and public sector investment, and the growth of ethnic populations that trail in educational opportunities and outcomes. Like Tienda, he argues that the country as a whole has an economic stake in overcoming these inequities.

“Given current trends, between 2000 and 2020, as the educational attainment of other countries is expected to rise, educational attainment in America will be falling for the first time in history.”

Part III: The Economic Costs of Inadequate Education

What, specifically, is the financial cost to society when young people do not graduate from high school? The researchers who focused on this question presented data on lost income and tax revenues and increased health expenditures, as well as on increased costs in the areas of public assistance and criminal justice activities that can be directly linked with failure to attain a high school degree.

Dropouts versus High School Graduates: Taxes

Lower earnings among dropouts alone could be costing the United States as much as \$158 billion in lost earnings and \$36 billion in lost state and federal income taxes for each class of 18-year-olds, reports Cecilia Rouse of Princeton University. Those amounts represent about 1.6 percent of the nation's gross national gross domestic product. Rouse also reports that a high school dropout earns about \$260,000 less over a lifetime than a high school graduate and pays about \$60,000 less in taxes. Annual losses exceed \$50 billion in federal and state income taxes for all 23 million of the nation's high school dropouts ages 18 to 67.

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Rouse shows that only about half the nation's high school dropouts hold down regular jobs, compared with 69 percent of high school graduates and 74 percent of college graduates. Adults with bachelor's degrees earn almost three times more annually than dropouts—\$33,701, compared with \$11,989.

Dropouts versus High School Graduates: Health

Health discrepancies between high school graduates and those without high school degrees are similarly pronounced, and they, too, are costly to the individual and to society. Peter Muennig, Assistant Professor in Health Policy and Management at Columbia University's Mailman School of Public Health, reports that high school dropouts have higher rates of cardiovascular illnesses, diabetes and other ailments, and require an average of \$35,000 in annual health-care costs, compared with \$15,000 for college graduates. Muennig reports that a 65-year-old person with a high school diploma typically enjoys better health status than a 45-year-old who dropped out in 10th grade. Overall, high school dropouts live an average of nine fewer years than graduates.

Muennig calculates that the net present value of the drop in health-related costs due to an increase in attainment from 11th grade to high school graduation is approximately \$83,000 per student. The net present value of improving all 600,000 high school dropouts in 2004 by one grade would have been a \$41.8 billion drop in health-related costs.

Dropouts versus High School Graduates: Criminal Activity

Professor Enrico Moretti of the University of California at Berkeley sought to quantify the direct impact of increased schooling on the likelihood of engaging in criminal activity. Moretti confined his research to states

with compulsory schooling laws because the presence of these laws rules out other reasons—such as family wealth or cultural factors—why students might stay in school longer. By comparing the criminal activity of a state’s students in the years before and after a compulsory schooling law was enacted, Moretti is able to assert that any reductions in criminal activity/incarceration were solely, or at least primarily, due to increased education.

Increasing the high school completion rate by one percent for all men ages 20 to 60 could save the U.S. up to \$1.4 billion a year in reduced costs from crime, according to Moretti. He also finds that a one-year increase in average years of schooling reduces murder and assault by almost 30 percent, motor vehicle theft by 20 percent, arson by 13 percent, and burglary and larceny by about 6 percent.

Moretti estimates that completing high school raises individual annual earnings by more than \$8,000. From a policy perspective, Moretti argues that compulsory attendance laws are effective in reducing the number of dropouts.

Dropouts versus High School Graduates: Public Assistance

Improvements in the educational attainment of American students also have the potential to sustain current declines in welfare utilization, report Professors Jane Waldfogel and Irwin Garfinkel and doctoral student Brendan Kelly of the Columbia University School of Social Work. They estimate that America could save between \$7.9 billion and \$10.8 billion annually in spending on TANF (Temporary Assistance for Needy Families), Food Stamps and housing assistance by improving the educational attainment of those who currently do not complete high school. Single-mother high school graduates are 24 percent to 55 percent less likely to be on TANF than single-mother high school dropouts. The researchers find that if all single-mother dropouts earned a high school degree, there would be over 140,000 fewer recipients on Food Stamps, saving \$353 million. If all single-mother dropouts earned high school degrees and some also attained additional education, 63,000 fewer single-mother families would be on housing assistance, saving an additional \$313 million annually.

Finally, they estimate that if one third of all Americans without a high school education (not just single mothers) went on to get more than a high school education, the savings would range from \$3.8 billion to \$6.7 billion for TANF, \$3.7 billion for Food Stamps and \$0.4 billion for housing assistance.

“Increasing the high school completion rate by one percent for all men ages 20 to 60 could save the U.S. up to \$1.4 billion a year in reduced costs from crime...a one-year increase in average years of schooling reduces murder and assault by almost 30 percent, motor vehicle theft by 20 percent, arson by 13 percent, and burglary and larceny by about 6 percent.”

Part IV: The Civic Costs of Inadequate Education

Clearly the financial impact of inadequate education is significant, and the potential return from investing up front in better educational opportunities for all children is an incentive that crosses all political lines. But there is another consequence of educational inequity that may pose an even bigger threat over the long term: the damage it inflicts by excluding vast numbers of young people from participation in American civic and political life.

Like other speakers at the symposium, Professor Jane Junn of the Eagleton Institute of Politics at Rutgers University painted a picture of an American society that is sharply stratified, with whites at the top of the education ladder and people of color at the bottom. Junn reports that 25 percent of Latinos have less than a ninth grade education, versus just 3 percent of whites. Fourteen percent of blacks and 16 percent of Latinos have less than a high school education, versus 7 percent of whites; 20 percent of whites hold a bachelors degree, versus 12 percent of blacks and 9 percent of Latinos; and 11 percent of whites hold an advanced degree, versus 5 percent of blacks and 3 percent of Latinos.

FIGURE 6 Voting Activity by Educational Attainment, 2000 and 2004

	% Citizen population reported voting, 2000	% Citizen population reported voting, 2004	% of overall population, 2004
Less than 9th grade	39	39	6
9th to 12th grade, no diploma	38	40	10
High school graduate or GED	53	56	32
Some college or Associate's degree	63	69	27
Bachelor's degree	75	78	17
Advanced degree	81	84	9
Total:	60	64	101*

*Column adds to more than 100 percent due to rounding.

Like others who have explored this issue, Junn also finds that people with higher levels of educational attainment are more civically and politically engaged (see Figure 6). She reports that in 2004, college graduates were significantly more likely to vote than Americans without a high school degree, replicating a longstanding pattern of political participation directly proportional to educational attainment. She found that 39 percent of those with less than a 9th grade education voted in 2004 versus 56 percent of those with a high school degree/GED, 78 percent of those with a bachelor's and 84 percent of those with advanced degrees.

Furthermore, she found that whites are more civically and politically engaged than other ethnic/racial groups. In 2004, 14 percent of whites contributed to a political campaign versus 5 percent of blacks and 8 percent of Latinos; 16 percent of whites contacted a government official in 2004, versus 9 percent of blacks and 9 percent of Latinos; and 24 percent of whites signed a petition versus 17 percent of blacks and 20 percent of Latinos.

“Education is the cornerstone of democracy because it aids in the cognitive, ideological and strategic development of democratic citizens, allowing voters to acquire political information, deliberate about the

issues, voice perspectives and engage in politics,” Junn writes.

Yet at the same time, Junn argues that education does not buy an equal share of voice in the political process—in fact, because whites on average are better educated and earn more money (even when comparably educated), it can reinforce existing disparities. These are particularly apparent in political activism that requires money and other inequitably distributed resources. For example, Figure 7 shows that whites are more likely to contribute to a campaign—almost twice as likely as Latinos and almost three times as likely as blacks. There is a stark difference in the percentage of each group that contacted a government official. Again, whites were almost twice as likely as blacks or Latinos to contact a government official, an activity that requires a particular kind of knowledge and often, access.

“Education is the cornerstone of democracy because it aids in the cognitive, ideological and strategic development of democratic citizens, allowing voters to acquire political information, deliberate about the issues, voice perspectives and engage in politics.”

“Despite the egalitarian potential of education, the racial and class stratification in democratic participation in the United States is the results of inequities in education,” Junn says.

FIGURE 7

Political Participation by Racial Group, 2004	% White	% Black	% Latino	% Asian American
Electoral activities				
Voted in 2000 Presidential Election	68	65	51	61
Persuade others how to vote	22	18	22	22
Attend campaign meeting or rally	9	4	7	7
Work for candidate	5	3	4	3
Contribute to a campaign	14	5	8	12
Average number of electoral activities	1.16	.95	.92	1.05
Other types of participation				
Contact government official	16	9	9	14
Sign petition	24	17	20	23
Protest	4	4	4	5
Boycott	11	6	11	11
Average number of other activities	.55	.36	.44	.53
Number of Respondents	421	416	416	354

Part V: Solutions

Inadequate education in America is far from an inevitability. Four presenters at The Campaign's Symposium offered solutions to promote adequate education, close the achievement gap and provide significant benefits to society. Their proposed solutions focus on two core concepts: high-quality preschool and meaningful parental involvement—not only in children's schooling, but in all aspects of their lives that bear on learning.

High-Quality Early Childhood Education

In "The Promise of Early Childhood Education," Professor Clive Belfield of Queens College, The City University of New York, argues that preschool can reduce inequalities among children both at the start of school and later on in adulthood, while also generating savings for society and for taxpayers. Belfield's research shows that effective preschooling reduces inequities by affecting a whole range of behavioral outcomes both during childhood and throughout life.

The key here is the term "effective." Broadly speaking, early educational experiences have the potential to provide children with a range of benefits. These benefits include a cognitive advantage, enhanced family support, a strong educational foundation for schooling and an early socialization into behaviors that are effective later in life and that may affect receptivity to the learning process and motivation to achieve in school. However, in analyzing the strong evidence that pre-K can close the "readiness gap" on entry to school, Belfield concludes that model programs that target select populations by gearing interventions to their specific needs are more effective at closing the achievement gap than would be a universal pre-K program.

“Three decades of research have shown that parental participation improves student learning. And successful interventions can alter parenting behavior to improve school readiness.”

Participation in such model early education programs reduces high school dropout rates, special education placements, teen parenting rates and the future likelihood of being charged with a crime. And these changes in behavior in turn hold the promise for reducing the economic burden in the long run to society and taxpayers, with up to a \$7 return on each dollar invested in preschooling. Other economists consistently have found that preschooling produces societal gains in income tax revenues as participants earn more; in expenditure savings as schools are able to reduce special education placements and increase grade retention; and in cost savings through reduced need for criminal justice system expenditures.

Preschool, Parental Involvement and “Transformative School Reform”

Professor Ronald Ferguson of the John F. Kennedy School of Government at Harvard University is also a strong proponent of early education, but he argues that its potential rewards can't be achieved without strong parental involvement and the adoption of proven parenting “best practices” across cultures. In endorsing a greater emphasis on pre-K, Ferguson calls for center-based preschool programs that work to improve parenting skills as well as school readiness. Such programs are especially beneficial to poor children and their families, Ferguson says.

Ferguson also calls for a focus on more skillful parenting outside the preschool setting, also arguing for a national movement focused on “transformative school reform.”

Ferguson reports that three decades of research have shown that parental participation improves student learning—and he notes that successful interventions can alter parenting behavior to improve school readiness. For example, in one study, it was found that equalizing the number of children’s books in the home would be predicted to reduce the residual black-white gaps in arithmetic and reading-readiness scores by the equivalent of one-fifth and one-third respectively. Ferguson acknowledges that resource disparities between blacks and whites are a major obstacle to implementing such solutions on a broad scale. He also argues that resource disparities at least partly explain why parenting practices and opportunities for effective parenting differ across groups.

In light of the precarious future America faces as a result of its under-investment in education, Ferguson calls for “a movement for excellence with equity that has as its goal raising achievement and closing the gaps, and that should aspire to high-quality learning opportunities for children and adults alike.” He proposes a “deeply transformative community-level school reform” with the “long-term goal of institutionalizing excellence in the people and their social networks that are embedded in the everyday life of their districts.” Again, Ferguson recognizes the challenges involved in implementing such a strategy: “Progress in a national movement for excellence in equity will require lifestyle changes in the ways that the nation does schooling.” He argues that transformative, district-level reform may be the only way to make progress at the scale the nation needs. But, to date, most districts—city, suburban and rural—are woefully behind in such work.

“Participation in early education programs reduces high school dropout rates, special education placements, teen parenting rates and the future...reducing the economic burden to society and taxpayers, with up to a \$7 return on each dollar invested in preschooling.”

Conclusion

The demographic data presented at the Symposium paint a picture of a not-too-distant future in which—should present trends persist—the proportion of young Americans who are least likely to be well educated or pursue higher education will be on the rise. To an extent, this reflects the fact that when immigrants come to the U.S. from countries with poor educational systems, America reaps the products of other nations' educational neglect. Yet, as our Symposium clearly demonstrated, America's own decades-long under-investment in education, health, and other human resource institutions, and the nation's pronounced disparities in the distribution of these resources are also primary contributing factors. Among the young, the populations that are growing the fastest are poor youth and youth of color. These are the young people most likely to attend resource-poor schools, be taught by under-qualified teachers, be assigned to a special education track, experience more health problems, have less access to quality health care and live in substandard housing. In short, this is the population that will be at highest risk for poor academic achievement and for dropping out. Such individuals already account for economic and social costs to society that are staggering. In light of projected demographic shifts, these costs to society are going to increase dramatically unless there are significant changes in policy, spending and allocation of resources that improve not only the schooling, but also the life chances of this population.

Furthermore, the demands of the workplace have changed dramatically over the past 50 years. Being a highly skilled worker is an evermore essential prerequisite to the most rewarding employment in the worldwide marketplace. Young people without a high school degree, or even a college degree, will be more disadvantaged than ever before—and increasingly they will handicap America's ability to compete economically with other nations.

Again, viable solutions are at hand. America can invest in education, in schools, and in its young people. But as Rothstein and Wilder so eloquently argue, mere investment, while necessary, will not be sufficient, nor will a focus on education alone.

“...Children with better academic achievement may earn more in less stressful jobs and be in better health as adults. Children with better health may have better school attendance and thus have higher achievement. Parents who earn more may accumulate savings which can be used to send children to college and inspire them to do so. Because causal relationships between these various domains are often multi-directional, it is likely that...inequality can be substantially reduced only by sustained policy attention to many, if not all of these domains simultaneously.”

The Campaign for Educational Equity at Teachers College embraces this comprehensive view of educational equity. Directly following the Symposium, The Campaign unveiled an agenda that includes research, demonstration projects, dissemination of information and policy recommendations and advocacy in 12 issue areas. These range from development of curriculum to improved student health, to the racial and economic integration of schools.

Ultimately, as the Symposium's research has shown, the return on such an investment will far outweigh the initial cost. Yet the decision to pursue this course must be rooted in more than compelling numbers. For as Congressman Charles Rangel said in his opening address at our Symposium,

“You can't measure the cost of a kid without a dream.”

The Campaign for Educational Equity

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