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The Cost of Inequity in Education

A Review of the Policy-Related Research

Background

Studies on the extent of inequity in U.S. education are not new, though concern about inequity has varied with the times. In its early history, public education was not seen as an essential feature in national policy, and thus the framers of the U.S. Constitution did not see it as necessary to include an education clause. In those formative years, education was seen as necessary for a few elite, who required some higher level of education in order for them to handle the affairs of the states and nation. (Wagner, 2008)

Concerns grew over time about the need for an informed electorate that led to a push for states to adopt policies to provide education for their citizens. The states subsequently included in their own constitutions provisions requiring establishment of public education in local communities. These early state provisions would generally call for the creation and operation of public schools in local communities, encouraging – but not necessarily requiring – attendance of school-age children. One reason for the reluctance to promote mandated local public schools was the inevitable question of who would control and bear responsibility for the financial support of those schools. By the early 1900s, most states had adopted provisions requiring operation of local public schools, and most provided some level of state support.

By the mid-1900s most states had adopted policies that required children of prescribed ages to attend local schools. The compulsory ages ranged from as young as 4 to as old as 18. Initial compulsory schooling was limited to young children, with most education requirements limited to elementary schooling levels. Over time, increasing literacy and educational levels led to the expansion of compulsory schooling to include young adults to age 17 to 18, with maximum ages varying by state.

(Tyack, 1976)

Though school attendance was initially limited to White children, by 1918 compulsory school attendance applied to all children, though education for each might be provided in separate (and inherently) unequal school facilities. *Plessey vs. Ferguson* in 1896 gave legal approval for the segregation of students in separate schools. The landmark decision in *Brown vs. Board of Education of Topeka, Kansas* in 1954, however, called for the abolishment of segregated schooling in all states. In Texas, schools remained segregated until a federal ruling outlawing continuation and state sanctioning of segregated schools was handed down in 1964 – though actual compliance with the law was not enforced by the state until litigation was filed in 1971 (*U.S. vs. Texas*). Texas was among many states that desegregated its public schools for years after the *Brown* ruling, and only after additional legal actions were launched at state level courts did this change.

Non-Separate, But Still Unequal

After the legal dismantling of separate and unequal schooling, inequities remained intact across schools within states and often even within school districts. Inequities in school funding were legally challenged starting in the 1960s in California in *Serrano vs. Priest*; New Jersey in *Robinson vs. Cahill*; and New York in *Leviton vs. Nyquist* (Cohen, Levin & Beaver, 1973). A concurrent federal legal challenge to school funding was filed in Texas in *Rodriguez vs. San Antonio ISD*, where in a 5-4 ruling, the U.S. Supreme Court determined that inequities in the state funding system needed to be addressed in state-level judicial arenas.

Inequities in public education funding were the norm in U.S. schools, and the great majority have had the approach used to fund public education

challenged in court. Over time, 27 states have had their inequitable funding systems ruled unconstitutional, while 20 have fended off similar challenges (School Funding Updates, 2010).

More recent legal challenges to state educational funding plans have focused on the “adequacy” of funding provided to school systems, particularly in light of growing numbers of state “mandates” related to local program operations that include curriculum offerings, student testing and graduation requirements.

A new generation of policy challenges has focused on the extent to which states are adequately funding programs for students with special needs ranging from special education to low-income and limited English proficiency (School Adequacy Litigation, 2010).

Expanding Expectations for All Schools and All Students

Some of the pressure for increased and more equitable funding has emerged from growing demands that schools more effectively educate and graduate more of their students. With increased demands for improved school accountability we have seen an increase and delineation of what is expected from public education, with the bottom line being the number of students who graduate from high school. Still, some do not consider it sufficient that students merely graduate from high school. For many, the new standard should be continuation into and graduation from college. This new goal is reflected in the Lumina Foundation’s target that by the year 2020, 60 percent of U.S. students graduate from college, and President Obama’s objective that by 2025 the United States once again should be leading the world in the number of college-educated citizens.

Justification for raising the bar of expectations for U.S. schools has emerged from research on the education and skills requirements projected for the workforce of the future. With most jobs expected to require at least a high school diploma and preferably some level of higher education, the conversations have shifted from focusing on whether or not we should improve graduation rates and college attendance and completion rates, to *how* these more ambitious goals can be accomplished.

Some policymakers and many citizens are not yet convinced that the costs involved in achieving these

higher student and school performance standards justify the return on those investments. In a comprehensive review of the cost benefits of improved educational outcomes among U.S. students the highly regarded Henry M. Levin (2009) reports the following: “Improvement in educational outcomes must acknowledge and address existing inequities in the educational outcomes that currently characterize U.S. schools. According to national level data, there are significant and unacceptable gaps in the percentages of students who graduate from high school and enroll and complete college across various gender/ethnic groups; Hispanic males drop out at rates exceeding 50 percent and White dropout rates for both male and females are well below those of Blacks and Hispanics.”

Educational Attainment of U.S. Population Aged 20 (in Thousands)

Population	Under 9 th Grade	Grades 9-11, or GED	High School Graduate	College Level	High School Dropout
Male	63	450	638	1,101	23%
White Male	18	194	402	749	16%
Black Male	6	69	99	127	25%
Hispanic Male	38	168	104	48	58%
Other	1	19	33	177	9%
Female	33	259	508	1,183	15%
White Female	6	100	297	822	9%
Black Female	0	71	96	129	24%
Hispanic Female	25	63	81	114	31%
Other	2	26	33	118	16%

Note. “Grades 9–11” includes persons with a GED. “College Level” includes those with some college and those with at least a B.A. degree. Dropout percentages include all persons with less than a complete high school education. From Current Population Survey of the U.S. Census (March 2005). Race-specific adjustments for rates of institutionalization to take account of incarceration are from Raphael (2004); The average rate of incarceration for Black, male high school graduates is 9%; for Black males with less than a high school education it is 23%. Race-specific adjustments for the GED that are shifted to the dropout category are from Rumberger’s (2004) analysis of NELS 2000: Of all graduates, 15% of Blacks are GED holders, as compared with 8% of Whites.

Source: Levin, H.M. “AERA Distinguished Lecture: The Economic Payoff to Investing In Educational Justice,” *Educational Researcher* (January-February 2009) Vol. 38, No. 1. pp. 5-20.

Access to Higher Education

Differences in levels of education go beyond the numbers who graduate from high school. According to the same data, there are large numbers of students who go on to acquire some level of college education. Unfortunately, the number of individuals who report getting some level of education beyond high school varies significantly across racial and ethnic groups. At the college level, White males tend to have higher participation levels than all other groups, exceeding Black college enrollment rates by 13 percent and Hispanic rates by over 40 percent. Combining high school graduation and

college enrollment reveals a gap of over 40 percent between White and Hispanic males, and 22 percent among White and Hispanic females.

In Texas, state educational attainment mirrors national trends. According to recent studies analyzing state graduation data, Texas graduated only 65 percent of its freshmen class (Johnson, 2009). And less than half of high school graduates go on to enroll in post-secondary education, with the majority of those concentrated in two year colleges (Orfield, et al., 2004).

Educational Attainment of U.S. Population Aged 20 (in thousands)

Population	Percent Under 9 th Grade	Percent Grades 9-11, or GED	Percent High School Graduate	Percent College Level	Percent High School Grad and College
Male	2.8%	20.0%	28.3%	48.9%	77.2%
White Male	1.3%	14.2%	29.5%	55.0%	84.4%
Black Male	2.0%	22.9%	32.9%	42.2%	85.3%
Hispanic Male	10.6%	46.9%	29.1%	13.4%	42.5%
Other	0.4%	8.3%	14.3%	77.0%	91.3%
Female	1.7%	46.9%	25.6%	59.7%	85.3%
White Female	0.5%	13.1%	24.2%	67.1%	91.3%
Black Female	0.0%	8.2%	32.4%	43.6%	76.0%
Hispanic Female	8.8%	24.0%	28.6%	40.3%	68.9%
Other	1.1%	22.3%	18.4%	65.9%	84.4%

Source: Levin, H.M. "AERA Distinguished Lecture: The Economic Payoff to Investing in Educational Justice," *Educational Researcher* (January-February 2009) Vol. 38, No. 1. pp. 5-20.

Research has long established that there is a correlation between level of an individual's education and life chances, i.e., these differences in educational completion levels translate to major differences in lifetime earnings and quality of life.

Economic Payoff of High School and College Diplomas

Levin (2009) shares data on the impact of levels of lifetime income differentials by race and gender, outlined in the table below. According to the data, male high school graduates earn from \$120,000 to \$300,000 more than non-graduates with the largest earnings differentials reported among Whites and African Americans.

Differences in earnings between female dropouts and high school graduates ranged from \$244,000 among White female graduates vs. non-graduates, to between \$120,000 and \$144,000 between African American and Hispanic graduates

compared to non-graduates within each group. While the gap in earnings among high school dropouts is apparent across all groups, the data reflect that high school graduation results in greatest income gains for males.

The benefits of college degrees compared to earnings of high school dropouts are even more dramatic. On average, a college graduate will earn more than \$1 million more over a lifetime than a high school dropout. The largest differences in earning power are found among White males where college graduates out-earned White dropouts by \$1.37 million. Among male African Americans, college graduates earn \$1.14 million more than African American dropouts. Among Hispanics, the disparity is \$950,000 – a smaller gap than among African Americans caused in part by the fact that male Hispanic dropouts tend to have higher earnings than African American dropouts and also earn slightly higher incomes over time.

Income disparities among female dropouts compared to college graduates also are notable though at lower levels when compared to their male counterparts across all groups. Female White dropouts earn \$750,000 less than female White college graduates. But that disparity is actually lower than the \$850,000 income gap among female African American dropouts and college graduates, and the \$816,000 gap between female Hispanic dropouts and college graduates, clearly suggesting

that the benefit of a college degree is most beneficial to the nation's minority female students.

On the other hand, the fact that there is such a notable gap between average earnings for males and females at all educational levels clearly suggests that equal work for equal pay (or at least for equal levels of education) is far from a reality in the United States.

Total Lifetime Earnings by Race and Ethnic Group and Gender				
Population	High School Dropout	High School Graduate	Some College	BA Degree or Above
White Male	\$627,000	\$949,000	\$1,164,000	\$2,014,000
Black Male	\$339,000	\$637,000	\$869,000	\$1,485,000
Hispanic Male	\$602,000	\$719,000	\$826,000	\$1,552,000
Other Male	\$618,000	\$862,000	\$1,036,000	\$1,839,000
White Female	\$235,000	\$479,000	\$604,000	\$986,000
Black Female	\$300,000	\$420,000	\$576,000	\$1,150,000
Hispanic Female	\$272,000	\$416,000	\$558,000	\$1,088,000
Other Female	\$249,000	\$455,000	\$587,000	\$1,025,000

Note: Figures are in 2004 dollars, corrected for incarceration possibilities. WE assumed 5% productivity growth in earnings and a discount rate of 3.5%

Source: Levin, H.M. "AERA Distinguished Lecture: The Economic Payoff to Investing In Educational Justice," *Educational Researcher* (January-February 2009) Vol. 38, No. 1. pp. 5-20.

In a study released in March of 2010, researchers noted that, while all groups tend to benefit from increased levels of education, at the college level, students who came from low-income backgrounds *tended to realize the greatest gains* as a result of attaining a college degree (Brand & Xie, 2007). This benefit for individuals from less advantaged backgrounds suggests that, if return on investment is criteria for prioritizing funding, programs that allocate monies on the basis of student need provide the best long-term return on investment.

The Additional Costs Associated with Graduating More Students from High School and College

Research also has established that the benefits of providing additional schooling for a greater percentage of students far outweigh the additional expenses that are associated with keeping more students enrolled all the way to graduation from high school and college. According to one study on cost-benefits of high school graduation conducted by the Center for

Public Policy Priorities, the net gain resulting from graduating one cohort of Texas high schoolers was an estimated \$1.3 billion in just over a four-year period (CPPP, 2006).

In other research that includes not only additional costs for continued enrollment but also costs for specialized interventions and costs for continuing on to and graduating from college, researchers note that add-on costs can range from \$59,000 to \$140,000 per expected high school graduate (Levin, 2009). While seeming high, these outlays are far out-paced by the combined benefits of increased earnings and tax payments associated with higher levels of educational attainment which *average* over \$980,000 for all sub-groups of student groups analyzed.

Recognition of the Non-Education Based Cost of Education Inequity

Though early studies tend to focus on the affects of differing levels of education on earning over the course of an individual's productive work years, it has long been stressed that the costs of

under-education extend beyond earnings (Cárdenas, et al., 1986). For example, researchers recognize that schooling has implications for the extent of tax contributions of wage earners, noting that the higher the income levels of taxpayers, the greater the benefits to the local, state and federal governments derived from state income taxes, sales taxes, property taxes and an array of other tax revenues that are directly linked to individual incomes. Over a working lifetime, a male dropout pays from \$130,000 to \$232,000 in income taxes. By contrast, a male high school graduate contributes \$232,000 to \$358,000, and a male college graduate from \$610,000 to \$854,000.

Just the additional net income tax collection benefits attributable to earning a high school diploma totals \$128,000. A male college graduate in turn can pay upwards of \$600,000 more in taxes than a male high school dropout. For a group of 100 individuals, the cumulative gain totals \$60 million over the working life of the group. Comparable differences were found for females, though at lower levels of revenue, which coincide with lower income levels across all female groups. (Levin, 2009)

Total Lifetime Income Taxes by Race and Ethnic Group and Gender

Population		High School Dropout	High School Graduate	BA Degree or Above	Differences Dropout vs. HS Graduate	Differences Dropout vs. College Graduate
Male	Min	\$130,000	\$232,000	\$610,000	\$102,000	\$480,000
	Max	\$212,000	\$358,000	\$854,000	\$146,000	\$642,000
Female	Min	\$73,000	\$139,000	\$405,000	\$66,000	\$332,000
	Max	\$82,000	\$156,000	\$470,000	\$74,000	\$388,000

Note: Differences calculated by IDRA.

Source: Levin, H.M. "AERA Distinguished Lecture: The Economic Payoff to Investing In Educational Justice," *Educational Researcher* (January-February 2009) Vol. 38, No. 1. pp. 5-20.

Other Cost Savings Correlated with Increased Levels of Educational Attainment

Additional income tax revenues, however, are not the only by-products of higher levels of schooling. High school graduates have lower rates of incarceration, lower incidences of collecting unemployment compensation, and better health than non-graduates. In a similar vein, college graduates reflect the lowest levels of costs to the criminal justice system, lowest unemployment rates, and lower utilization of health care when compared with less educated peer groups.

Health Care Costs

Citing Cutler & Lleras-Muney, Levin (2009) writes, "Increased educational attainment reduces mortality, changes health behaviors, and improves health outcomes." Using data from the Medical Expenditure Panel Survey, the U.S. Department of Health and Human Services, and the Agency for Health Care Research and Quality, Levin summarizes health-related cost data by education level. These data clearly show that college graduates generally cost the state and federal health systems between one-tenth to one-twentieth of the funds spent on non-graduates, while high school graduates have 50 percent lower health care related costs when compared to non-high school graduates.

Total Lifetime Health Care Costs by Race and Ethnic Group and Gender

Population	High School Dropout	High School Graduate	Some College	BA Degree or Above
White Male	\$43,500	\$17,000	\$12,900	\$3,100
Black Male	\$82,400	\$34,200	\$25,100	\$6,000
Hispanic Male	\$59,000	\$23,300	\$16,700	\$4,000
Other Male	\$67,600	\$24,800	\$18,200	\$4,000
White Female	\$60,800	\$23,200	\$15,900	\$3,600
Black Female	\$107,200	\$48,500	\$33,500	\$7,800
Hispanic Female	\$73,700	\$29,500	\$19,600	\$4,400
Other Female	\$80,500	\$33,600	\$23,000	\$5,300

Note: Costs include Medicaid and Medicare. Discount rate is 3.5%.

Source: Levin, H.M. "AERA Distinguished Lecture: The Economic Payoff to Investing In Educational Justice," *Educational Researcher* (January-February 2009) Vol. 38, No. 1. pp. 5-20.

Job Training Savings

In addition, improving educational outcomes can have a direct benefit to the private sector. In research calculating the costs involved in providing training to under-educated workers, a private sector training cost study reported that businesses across the country spent an estimated \$17 billion in training-related outlays to offset under-education provided to its work force. In fact, business complaints that they have to pay twice for skills and competencies that they believe should have been developed by K-12 schools, has been an important factor driving expanding private sector involvement in state and national education policymaking.

Criminal Justice Systems Savings

There is common public misconception that most dropouts wind up in the criminal or juvenile justices system. When, in truth, only a small sub-set of under-educated individuals are in those systems. By the same token, among those entangled in the nation's criminal justice systems, specifically in prison, a great majority are individuals who did not complete high school. According to research on the costs of incarceration in the state of California, annual rates average \$57,200 per incarcerated person per year. By contrast, the average annual expense to keep an individual in a school is only about \$10,000, meaning that investing in a student's education over four years of high schools is less expensive than subsidizing that same individual for one year in the prison system (Urban Strategies Council, 2007).

Welfare and Food Stamp Cost Savings

As is the case with the assumptions about dropouts and the criminal justice system, not all students who do not graduate become participants in state welfare or food stamp programs. But research has established that those individuals with lower levels of education tend to use social support services at rates that are notably higher than high school and college-educated individuals (Martin & Halperin, 2006). According to research, a large percentage of individuals participating in food stamp programs have less than a high school education. In a similar vein, heads of households from families receiving public assistance report that they have less than 12 years of schooling.

Data also suggest that, while many individuals do not remain on those rolls forever, there is a tendency to remain in that dependent status for several years and need to re-enroll in said programs in tight economic times. Conversely, data on participation by level of education suggests that high school and college graduates tend to use those programs in notable more limited levels and, if enrolled at all, tend to exit from participation at more accelerated rates than non-high school graduates.

Summary, Conclusions and Related Policy Implications

Given all that is known about the costs and benefits associated with completion of high school and college, why is it that states and the federal government have not taken more aggressive action to address the issue? One central obstruction to a more speedy resolution is simple denial.

Recent studies of state and local level dropout reporting find that a central challenge the many and diverse ways that policymakers and schools tend to define dropouts. One would assume that if a student is not in school and is not known to actually be enrolled in another school that student is most likely a dropout. Unfortunately, dropout definitions have been made much more complex, with a major issue involving actual verification of an individual student's status once they leave a school. It has been suggested that we are much more capable of tracking a package or financial transaction across state and national borders than we are of tracking individual children's educational status.

Recent efforts to define and count dropouts have been undertaken, most recently by the National Governor's Association (Curran & Reyna, 2008). A key facet of that (and any future) effort however is dependent on the existence of a common and integrated data system. The fact is that states are at differing stages in their student data systems and are challenged by what is needed to create data frameworks that can effectively serve local, state and national data needs.

Beyond the data alignment issues, many states and schools, in truth, go through all sorts of procedures to mask or not know actual dropout rates. This blatant avoidance behavior is prevalent where leaders are more concerned with having lower dropout counts than in having fewer numbers of dropouts. Thus, there is little worry about consequences of owning up to the size of the problem.

A related reason for the large scale of dropout denial is that schools worry about accountability system implications, where they will be subject to ratings that indicate that they are not getting the job done. Add to this, the reluctance of some policymakers to provide funding to address the issue.

The challenge of transitioning more students from high school into college has been a long-standing challenge as well. The United States has slipped from its ranking in the number of students who hold a college degree. While college enrollment has held constant or even increased among White students, minority enrollment has not. In fact, as minority students have become an increasing percentage of the K-12 population, colleges and universities have

struggled and mostly failed to match those changing percentages within their incoming freshmen, as well as their overall student populations, let alone graduates. Even with adoptions of percent plans and focused affirmative action efforts that conform to court-mandated parameters, most states report that their minority enrollments and related graduation rates are far from acceptable.

In Texas, the state's higher education coordinating board has been monitoring progress of state efforts toward meeting overall and minority enrollment and graduation growth targets. In its latest *Closing the Gap* report, the board notes that Texas is exceeding its White student enrollment targets, is meeting its African American enrollment growth targets, is notably below its Hispanic enrollment target, and falling short of its minority graduation goals (THECB, 2010). Given the fact that the state's Hispanic population now constitutes the majority of students at the K-12 level, the state's failure to achieve targets in this critical area does not bode well for the future of higher education in Texas.

Providing tremendous counter-pressure are two developments. The first is the loss of many low skilled and unskilled job markets that served as the beneficiaries of dropouts. With the outsourcing of many such jobs or the elimination of many via technological innovations that replaced industrial and agricultural workers, there are very few work opportunities for under-educated individuals in this country, and in all regions of this country. This outsourcing trend, coupled with increasing demands of the workplace that *require higher skill and educational levels in all workers*, it is clear that the current approach to addressing the issue is unsustainable.

What then needs to happen or change in order to address the issue? Possible policy responses include the following.

- Require all schools, school districts and states to use the same procedures to calculate graduation and dropout rates.
- Create standard mechanisms for verifying a student's enrollment status that can be tracked within and across local communities, states and countries.
- Develop and disseminate annual or biennial

reports on the cost of dropouts and to states and local communities.

- Increase support for high school to college transition programs, especially those that use community-based approaches.
- Modify higher education funding formulae to provide additional funding for students who are low-income or historically under-represented groups.
- Provide incentives to spur college and universities to improve persistence and graduation rates.
- Develop and disseminate reports on the local, state and federal tax benefits of getting more students to graduate from high school and college.
- Develop and disseminate biennial reports on social services costs savings realized from increasing local and state high school graduation rates.
- Provide targeted funding specifically earmarked to increase graduation rates in local school districts, with strong monitoring procedures to ensure funding is used in intended ways.
- Require schools to evaluate all existing dropout prevention and recovery efforts to assess their effectiveness in increasing graduation rates, and discontinue those where there is no evidence of impact.

IDRA is an independent, private non-profit organization, directed by María Robledo Montecel, Ph.D., dedicated to assuring educational opportunity for every child. As a vanguard leadership development and research team for more than three decades, IDRA has worked with people to create self-renewing schools that value and empower all children, families and communities. IDRA conducts research and development activities, creates, implements and administers innovative education programs and provides teacher, administrator, and parent training and technical assistance.



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