Examining Decades of Growth in K-12 Education

A Close Look at Spending and Achievement Trends

Center for Education Policy | Texas Public Policy Foundation

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Executive Summary

The total cost of public education is often underestimated, and identifying exactly where the money is going is a tremendous challenge. Researchers, policymakers, and the media often compare the per-student cost of education by school, district, or state by citing the operating expenditures per-student cost, but fail to include debt service and building and remodeling facilities. The total cost of education includes all costs associated with educating students—operating expenditures, non-operating expenditures, the cost of state and regional personnel that administer education programs, and teacher pension costs.

During the current fiscal climate and the anticipated state budget shortfall facing lawmakers in the 2011 Texas Legislative Session, it is essential that state legislators and policymakers have accurate information about public school expenditures, understand where the money is actually spent, analyze major trends, and know the corresponding results in student achievement. This policy paper examines Organisation for Economic Co-operation and Development* (OECD) international data, national data from the Nation's Report Card and National Center for Education Statistics, and 20 years of state data from the Texas Education Agency.

Major Findings

United States trends versus International Trends

- The United States spends more money on public education (7.4 percent of GDP) than the average of 30 developed nations (6.1 percent of GDP).
- The U.S. spends a higher percentage of its education dollars on non-teachers and a smaller percentage on teacher compensation than developed nations across the globe.
- The U.S. spends more on facilities and buildings than OECD developed countries on average.

United States Trends

- The hiring of non-teaching staff increased at a higher rate than the hiring of teachers in public schools, changing the ratio from 7:3 (teachers to non-teachers) in 1949 to an almost 1:1 ratio in 2007.
- Employment in K-12 education has increased at a faster rate than student enrollment in public schools across the nation.

* The Organisation for Economic Co-operation and Development collects data and monitors trends for 30 developed nations. The 30 member countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.

- Nationally, over 20 years, per-pupil costs increased from $7,603 in 1987 to $11,674 in 2007, a 54 percent increase when adjusted-for-inflation.

- Public schools across the nation greatly increased their spending on facilities from 1990 to 2002 with an increase of 121 percent adjusted for inflation.

United States versus Texas Trends

- Texas spends a higher percentage of its state budget on public education and higher education than other states on average.

- Texas' per-pupil costs, adjusted for inflation, increased at a higher rate than the U.S. average (66 percent vs. 54 percent).

- Texas spent slightly more on facilities between 1990 and 2002 than the U.S. average (128 percent vs. 121 percent increase in constant dollars).

Texas Trends

- Total Texas public school expenditures increased 334.5 percent from 1987 to 2007, an increase of 142 percent when adjusting for inflation.

- Texas' central administrators had a larger increase in salaries over the last 20 years than teachers.

- Texas' per-pupil costs increased from $3,659 in 1987 to $11,024 in 2007, a 66 percent increase when adjusted for inflation.

- Texas' education staff increased 71.5 percent between 1989 and 2009, while student enrollment only increased 44.5 percent.

- Texas' public school spending on facilities between 1990 and 2002 increased by 128 percent adjusted for inflation.

Introduction

Public education is a significant function of state and local governments and consumes a large percentage of their budgets. But, what is the true cost?

In Fiscal Year 2008, state public education expenditures, on average, consumed 21.6 percent of state budgets.[1] When adding in higher education expenditures of 10.2 percent, on average, public education and higher education costs equaled 31.8 percent of state budgets.[2] Both public education and higher education expenditures consumed a higher percentage of Texas' budget than the U.S. average. In Texas, public education consumes 28.94 percent of the budget and higher education consumes 12.48 percent bringing the education total to 41.42 percent for the 2010-11 biennium.[3] This means that public education and higher education costs combined equal nearly half of Texas' budget. **Figures 5 and 6** on pages 12 and 13 show spending for both the U.S. average of state budget expenditures by category and Texas specific budget data by category.

It is important to realize that actual spending per-student in K-12 education is often much higher than reported by the media, education associations, or school officials. Often, the media and researchers use a cost-per-student number that excludes debt and building costs. The total cost of educating students includes debt repayment, the cost of building and remodeling facilities, regional and state employee costs, and teacher pension contributions.

The CATO Institute recently reviewed school district budgets and state records for the nation's five largest metro areas and the District of Columbia and found that "on average, per-pupil spending in these areas is 44 percent higher than officially reported."[4]

This partly explains why the general public seems to be misinformed on how much they spend on public schools. A recent poll* sponsored by *Education Next* and the Program on Education Policy and Governance (PEPG) at Harvard University found that the American public vastly underestimates average teacher salaries and per-pupil spending. The average respondent underestimated per-student spending by more than $6,000 and underestimated teacher salaries by $14,370. Americans underestimated both the cost to educate each student and teacher salaries. The respondent's estimate of per-student spending was only 42 percent of actual spending levels in their school district and respondents underestimated teacher salaries in their states by 30 percent. Almost 96 percent of the public underestimated either per-student spending in their districts or teacher salaries in their state.[5]

Student Enrollment

Student enrollment in public schools nationwide increased from 40 million students in 1987 to more than 49 million students in 2007. The nation's public school enrollment had an average annual growth rate of 1.05 percent and a total increase of 23.21 percent over the 20-year period.[6]

Over the last 20 years, Texas had a larger increase in public school student enrollment than the nation as a whole. In the 1988-89 school year, more than 3.2 million students attended Texas public schools. Enrollment increased to more than 4.7 million students in the 2008-09 school year.[7†] Student enrollment in Texas public schools had an average annual growth rate of 1.84 percent and a total increase of 44.5 percent.

It is instructive to examine the five most populous states in the nation and their total public school enrollment to see how Texas' student enrollment compares. In 2007, Texas had the second highest number of students in public schools. California had the most students in public schools.[8] **See Table 1** for student enrollment data in the five most populous states.

Table 1: Public School Student Enrollment in the Five Most Populous States 2007-08

State	Number of Students	Percentage of U.S. Average
California	6,343,471	12.87%
Florida	2,666,811	5.41%
Illinois	2,112,805	4.29%
New York	2,765,435	5.61%
Texas	4,674,832	9.48%
United States	49,292,507	—

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data.
Note: Enrollment includes students in PreK-12 grade.

* The poll was conducted between February and March 2007 and surveyed a nationally representative sample of 2,000 American adults.

† Texas public school enrollment includes the number of students attending charter schools.

Personnel

Schools employ a variety of individuals to perform a range of roles in public schools to help educate children. These include bus drivers, cafeteria workers, custodians, education aides, teachers, nurses, librarians, counselors, education diagnosticians, curriculum specialists, assistant principals, principals, and superintendents.

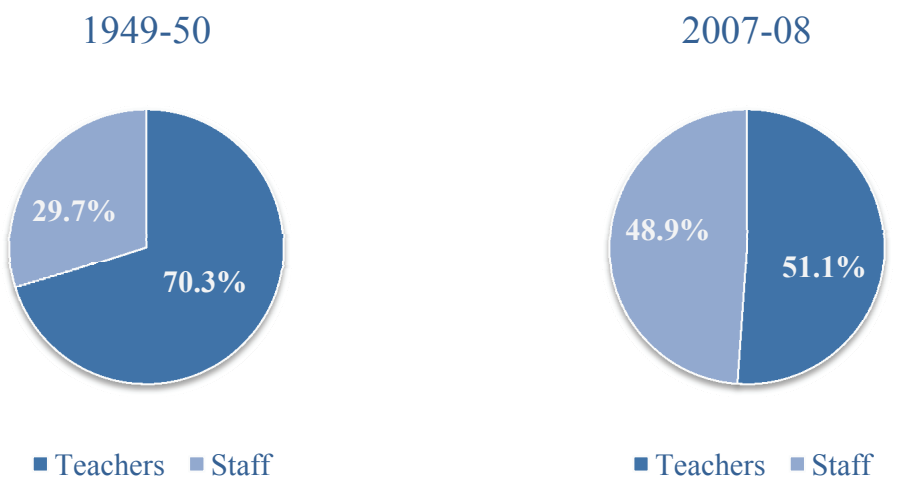
One trend that stands out is that the hiring of non-teaching staff increased at a higher rate than teachers in public schools around the country. In 1949, 70 percent of all education staff nationwide were teachers. In 2007, only 51 percent of all education staff were teachers.[9]

Thus, on average, for every teacher in a U.S. public school there is a non-teacher. According to data from the National Center for Education Statistics, the ratio changed dramatically between 1949 and 1980. As mentioned above, in 1949, teachers comprised 70.3 percent of all education personnel. By 1959, teachers comprised 64.8 percent of all education personnel. The percentage continued to fall and in 1969, teachers comprised 60 percent of all education personnel. By 1980, teachers only comprised 52.4 percent of all education personnel. Since 1980, the ratio of teachers to non-teachers has stayed pretty consistent, increasing or decreasing by a percentage point, at most, in the last 27 years.[10]

Unfortunately, due to data limitations, Texas data only goes back 20 years, but the trend and ratio is strikingly similar. As shown in **Table 2**, the number and percentage of staff hired by Texas public schools increased at a higher rate for non-teaching staff (76.6 percent) than for teachers (66.8 percent) over the last 20 years. The teacher to non-teacher ratio in Texas public schools follows the national trend with basically one teacher for every non-teacher. This nearly 1:1 ratio has stayed constant over the last 20 years—52 percent of education personnel were teachers in 1988-89 and 51 percent of education personnel were teachers in the 2008-09 school year.

Another notable trend is the growth rate of education personnel compared to student enrollment growth. According to data from the National Center for Education Statistics and *Education Next*, employment in K-12 public education has increased much faster than student enrollment growth in public schools across the nation.[13] **See Figure 2.**

Figure 1: Ratio of U.S. Teachers to Non-Teachers in Public Schools Between 1949 & 2007



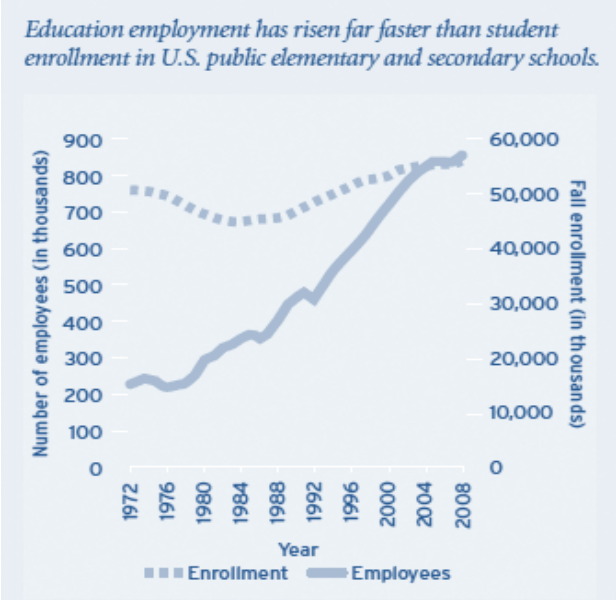
Source: U.S. Department of Education, National Center for Education Statistics, Digest of Education Statistics: 2009

Table 2: Growth in Non-Teaching Staff vs. Teaching Staff in Texas Public Schools, 1989-2009

Personnel Growth	1989	1995	2002	2009	Increase
Teachers	196,497	234,214	282,583	327,663	66.8%
Staff	180,728	215,207	277,480	319,152	76.6%
Total Personnel	**377,225**	**449,421**	**560,063**	**646,815**	**71.5%**

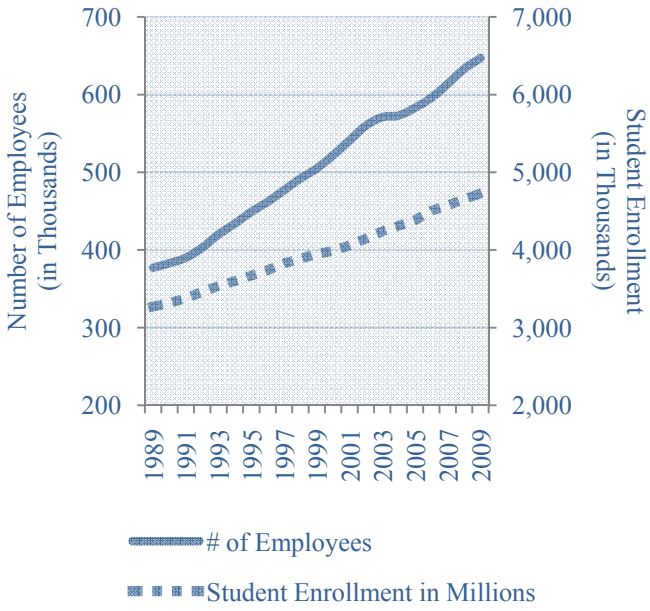
Source: Texas Education Agency, "State Snapshots 1988-2009".

Figure 2: U.S. Education Personnel Growth Exceeds Student Enrollment Growth



Source: Chart replicated from "Education Next," Winter 2010, Vol. 10, No. 1, 15

Figure 3: Texas Growth in School Employees Exceeds Student Enrollment Growth



Source: Texas Education Agency, "State Snapshots 1989-2009"

Texas has a similar trend. The number of school personnel hired over the last 20 years far exceeds student enrollment growth in Texas. In total, education personnel employed by Texas public schools increased 71.5 percent between 1989 and 2009 while student enrollment increased 44.5 percent. **See Figure 3**.

To examine how the five states with the largest student populations (California, Florida, Illinois, New York, and Texas) allocate their education personnel at the school district and school level, see Table 3, next page.

According to the National Center for Education Statistics, in 2007, Texas had the most public school employees of any state in the nation.[14] This is surprising considering that California had 1.6 million more students in public schools. Even with more students, California had 52,090 fewer total school personnel than Texas in 2007.[15]

Interestingly, California and Texas have similar numbers of school district staff (33,430 vs. 29,237), but allocate personnel differently. California has more school district administrative support staff and instruction coordinators than Texas while Texas

Table 3: Public School Personnel by Position in the Five Most Populous States, 2007

Personnel	California	Florida	Illinois	New York	Texas	United States
School District Staff						
Officials & Administrators	3,080	2,134	1,203	3,005	5,677	59,369
Administrative Support Staff	23,204	15,012	2,407	18,808	20,074	184,476
Instruction Coordinators	7,146	678	2,235	2,567	3,486	70,677
School Staff						
Principals & Assistant Principals	14,647	8,001	3,551	9,388	20,174	157,564
School & Library Support Staff	37,213	16,990	3,861	8,561	26,065	291,537
Teachers	305,230	168,737	136,571	211,854	321,929	3,178,142
Instructional Aides	65,846	29,907	29,567	38,999	63,017	718,119
Guidance Counselors	7,839	6,155	1,963	5,971	10,879	105,519
Librarians	1,259	2,924	1,963	3,154	5,066	54,385
Other Staff						
Student Support Staff	18,280	12,996	10,078	12,356	21,160	253,700
Other Support Services Staff	99,881	66,192	21,060	59,417	138,188	1,142,147
Total	**583,625**	**329,726**	**214,459**	**374,080**	**635,715**	**6,215,635**

Source: U.S. Department of Education, National Center for Education Statistics, "Digest of Education Statistics 2009"

has more school district officials and administrators than California. At the school or campus level, Texas has approximately 5,500 more school principals and assistant principals, 16,700 more teachers, 3,000 more guidance counselors, and 3,800 more librarians than California. California has approximately 11,000 more school and library support staff and 2,800 instructional aides. The biggest difference between Texas and California is the number of "other staff" broken down into student support staff and other support services staff. Texas has 41,187 more "other staff" at public schools than California.[16]

If Texas had significantly more schools than California, that might explain why Texas has more principals, teachers, counselors, and librarians. But, in reality it is actually the opposite—California had 1,225 more schools than Texas (9,983 vs. 8,758) in 2007.[17]

California chooses to hire fewer school personnel that most other states. In the 2007-08 school year, California was ranked 50th for the number of teachers, 51st for the number of librarians, 50th for the number of guidance counselors, and 48th for the number of principals and assistant principals.[18] California also has the highest average teacher salary in the nation, compared to Texas' ranking of 34th. According to the National Education Association rankings, the average teacher salary was $64,424 in California and $46,179 in Texas in 2007-08.[19]

It is important to note that class sizes are very similar for grades K-3, but very different in the later grades, with Texas having much smaller class sizes. For example, during the 2007-08 school year, the average class size in a fifth grade classroom was 22.2 in Texas and 28.7 in California. The average class size in a sixth grade classroom was 21.4 in Texas and 29.1 in California.[20] This explains why Texas has more teachers.

Texas fourth grade and eighth grade students scored higher on the National Assessment of Educational Progress test in reading and mathematics than the students in California. In 2009, Texas fourth grade students had an average reading scale score that was 10 points higher than fourth grade students in California. In mathematics, Texas eighth grade students had an average score that was 17 points higher than the average eighth grade score in California.[21]

Table 4: Full-Time Personnel Administering Texas Education Programs by State/Regional Agency

Year	Texas Education Agency*	Teacher Retirement System	Education Service Centers**
2000	853	397	2,952
2001	871	418	---
2002	901	437	3,196
2003	883	441	---
2004	639	440	2,875
2005	742	451	---
2006	840	444	3,049
2007	929	445	3,122
2008	981	454	3,258
2009	1,045	476	3,323

Source: Texas State Auditor's Office, Fiscal Years 2000-2009; Texas Education Agency, Regional and District Level Report to the Texas Legislature 2000-2004 & Annual ESC Data Collection 2006-2009
*Note: *TEA FTE's include State Board for Educator Certification personnel; **ESC FTE's do not include Head Start personnel.*

School personnel numbers do not include personnel at the state or regional level that administer various public education programs. The state education agency (Texas Education Agency), the state teacher pension agency (Teacher Retirement System), and regional education service centers all have employees that count towards the total number of education personnel and the total cost of public education. For example, in Fiscal Year 2009, the Texas Education Agency had 1,045 personnel and the Texas Teacher Retirement System[22] had 476 personnel.[23]* See **Table 4** for a breakdown of full-time staff totals for the Texas Education Agency, the Teacher Retirement System, and Regional Education Service Centers.

Salaries

A noteworthy trend on spending is that the United States spends a higher percentage of its education dollars on non-teachers than other countries and a smaller percentage of its education spending on teacher compensation. According to the OECD, the U.S. only devotes 55 percent of its education expenditures to teacher compensation compared to an OECD average of 63.5 percent. In addition, the U.S. spends 25.7 percent of its education expenditures compensating "other staff" compared to an OECD average of 15.5 percent.[24]

Nationally, teacher salaries have increased from $15,913 in 1980 to $51,329 in 2008. In constant dollars, that was a 23.4 percent increase in teacher salaries.

Compensation growth for non-teachers has increased at a higher rate than teachers in the classroom for almost 30 years. The average salary increase for superintendents increased from $39,344 in 1980 to $148,387 in 2008, an adjusted-for-inflation increase of 44.3 percent. Deputy or associate superintendent salary growth has been significantly higher, increasing from $37,440 to $134,245, a 37.2 percent increase when adjusted for inflation. Principals of elementary schools have the highest salary growth compared to principals at other primary and secondary institutions with

* The Texas Teacher Retirement System (TRS) administers retirement, disability benefits, death and survivor benefits, and health insurance for retirees to both public education and higher education retirees. TRS was created in 1937 and is one of the largest retirement systems in the nation. The Texas Teacher Retirement System has nearly 1.3 million participants (active and retired teachers). TRS has paid out nearly $77 billion in pension benefits since 1937. TRS retirement benefits are a defined benefit plan and not a defined contribution plan meaning the system can pay out more money to participants than was contributed.

salaries increasing from $25,165 to $85,907, an adjusted-for-inflation increase of 30.6 percent over the same time period. Surprisingly, school nurses and librarians received higher growth in compensation than classroom teachers. In 1980, school nurses made $13,788; in 2008, the average salary of a school nurses was $46,025, an adjusted-for-inflation increase of 27.8 percent. Librarians were compensated $16,764 in 1980 and $56,933 in 2008, a 7 percent higher increase than teachers, when adjusted for inflation.

Texas had a similar trend with central administrators receiving a larger salary increase over the last 20 years than teachers. As shown in **Table 5**, salary growth for Texas central administrators increased 100.5 percent, outpacing the 89.6 percent salary growth for Texas teachers from 1989-2009. School administrators had a smaller increase in salary growth of 78.8 percent between 1989 and 2009.

As shown in **Table 5** and **Figure 4**, Texas' average teacher salaries* increased from $24,876 in the 1988-89 school year to $47,159 in the 2008-09 school year. Texas' average school administrator† salaries increased from $38,521 in the 1988-89 school year to $68,891 in the 2008-09 school year. Texas' average central administrator salaries increased from $42,554 in the 1988-89 school year to $85,305 in the 2008-09 school year.[26] In constant dollars, teacher salaries increased 9.6 percent, school administrator salaries increased 3.4 percent, and central administrators had the largest increase in salaries at 15.9 percent from the 1988-89 to 2008-09 school years.

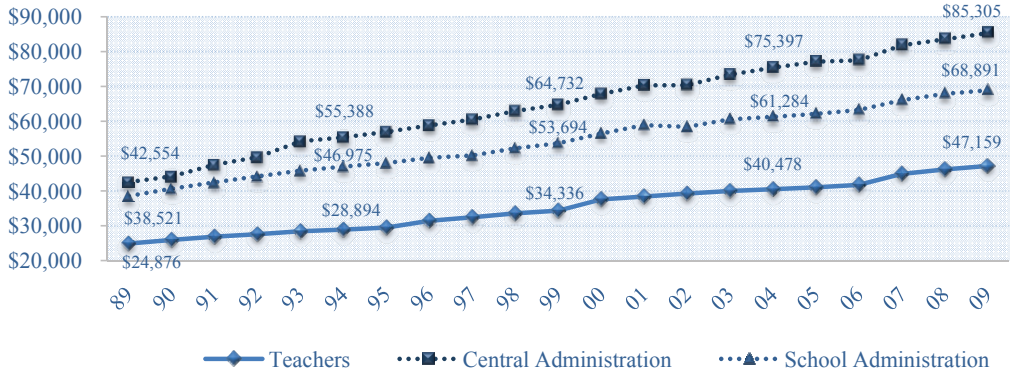
Central administrators are defined as superintendents, assistant or deputy superintendents, chief administrative officers, chief academic officers, business managers, tax assessor or collectors, athletic directors, and other administrators that are part of

Table 5: Salary Growth of Texas Administrators and Teachers, 1989-2009

Average Salaries	1989	1994	1999	2004	2009	Increase
Central Administration	$42,554	$55,388	$64,732	$75,397	$85,305	100.5%
School Administration	$38,521	$46,975	$53,694	$61,284	$68,891	78.8%
Teachers	$24,876	$28,894	$34,336	$40,478	$47,159	89.6%

Source: Texas Education Agency, "State Snapshots 1989-2009"

Figure 4: Texas Education Personnel Salary Growth, 1989-2009



Source: Texas Education Agency, "State Snapshots 1988-1989 to 2008-09 School Years"

* The average teacher salary is compensation for regular duties and does not include supplemental payments for extra duties such as sponsoring a club or coaching a sports team.

† School Administrators are also called Campus Administrators.

the central office rather than affiliated with a specific school. School administrators are defined as principals, assistant principals, school registrars, and other administrators affiliated with one specific school. Teachers are defined as teachers, special duty teachers, and substitute teachers.[27]

Calculating the cost per classroom in a particular school and comparing it to the average teacher salary is another way to examine the data. The cost per classroom at a specific school is achieved by determining the cost per student at a particular school and multiplying it by the average class size at that school. **Table 6** shows a variety of classrooms in math, science, English, and social studies in high schools all over Texas and compares it to the average teacher salary at that particular school. The highest cost per classroom was in social studies at Austin ISD's Reagan high school—$240,936 in the 2008-09 school year. The average teacher salary at Reagan high school in 2008-09 was $43,739, meaning that approximately 18.15 percent of the total classroom cost went to teacher salaries.

Expenditures

Another interesting trend is that the United States spends more money on public education than the average of the OECD developed countries. The OECD compares data between the 30 developed member nations on education and found that OECD countries as a whole spend 6.1 percent of their collective GDP on education, all levels combined (primary, secondary, and higher education). The United States spends 7.4 percent of its GDP on public and higher education.[28]

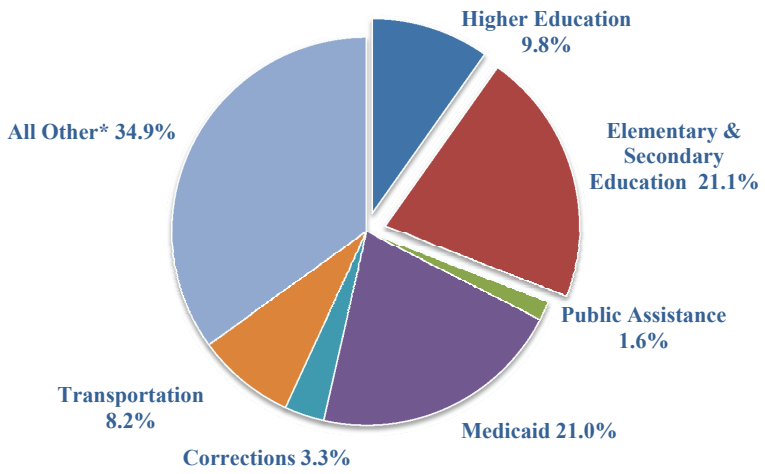
OECD countries spend, on average, $93,775 in U.S. dollars on a per-student basis over the duration of a K-12 education. The United States far exceeds that expenditure, averaging $123,361 for each student's K-12 education. Among the OECD countries, the U.S. is ranked fifth for the amount of money devoted to public education. United States per-student expenditures on primary and secondary education increased by 36 percent between 1995 and 2006, similar to the 40 percent increase by OECD countries during a time of relatively stable student enrollment.[29]

Table 6: Cost Per Classroom in Texas High Schools

Area	District	Campus	Subject	Cost per Classroom	Average Teacher Salary
Austin	Austin ISD	Reagan HS	Social Studies	$240,936	$43,739
Dallas	Dallas ISD	Franklin D Roosevelt HS	Mathematics	$196,554	$52,793
Dallas	Highland Park ISD	Highland Park HS	Social Studies	$175,626	$45,678
East Texas	Center ISD	Center HS	English/Language Arts	$133,083	$42,254
El Paso	El Paso ISD	El Paso HS	Science	$221,142	$51,431
Fort Worth	Aledo ISD	Aledo HS	Mathematics	$206,504	$50,231
Houston	North Forest ISD	North Forest HS	Mathematics	$208,027	$48,803
Rio Grande Valley	Weslaco ISD	Weslaco HS	Science	$178,354	$51,395
San Antonio	North East ISD	Lee HS	Social Studies	$187,664	$52,710
West Texas	Brownfield ISD	Brownfield HS	English/Language Arts	$197,865	$46,000
West Texas	Pecos-Barstow-Toyah ISD	Pecos HS	Social Studies	$187,390	$46,854

Source: Texas Education Agency, "Academic Excellence Indicator System Campus Reports, 2008-09"

Figure 5: State Total Expenditures by Category, 2009



Source: National Association of State Budget Officers, "The Fiscal Survey of the States 2010"
*Note: *Other is defined as, "A broad category that includes state functions not tracked individually in this report, such as hospitals, economic development, housing, environmental programs, health programs and the CHIP, parks and recreation, natural resources, air transportation, and water transport."*

The National Association of State Budget Officers reports that state public education expenditures on average consumed 21.1 percent of state budgets in Fiscal Year 2009.[30] When adding in higher education expenditures of 9.8 percent on average, public education and higher education costs equaled 30.9 percent of state budgets.[31] On average, Texas spends a higher percentage of its state budget on public education and higher education than other states. In Texas, public education consumes 28.9 percent of the budget and higher education consumes 12.5 percent, bringing the education total to 41.4 percent for the 2010-11 biennium.[32] **Figures 5 and 6** show spending by category for the U.S. average of state budget expenditures and Texas.

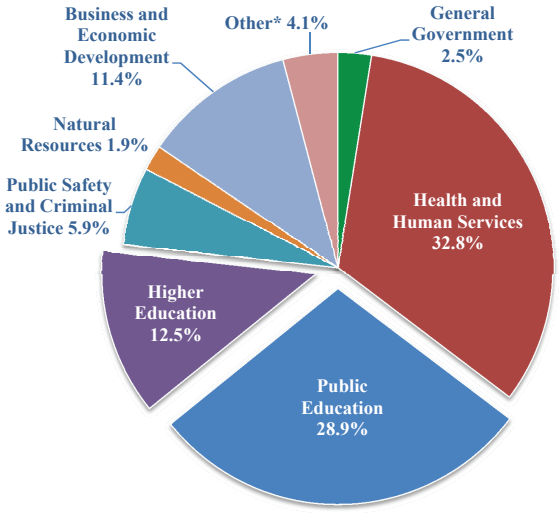
Researchers, policymakers, and the media often compare the per-student cost of education by citing the cost of operating expenditures per-student. However, this does not include the cost of debt service and building and remodeling facilities. The total cost of education includes all costs associated with educating students—operating, non-operating expenditures, the cost of the state education agency, any regional education personnel, and teacher pension costs.

Nationally, public education spending has increased from $532 per pupil in 1919-20 to $11,674 in 2006-07 in constant dollars. For comparison purposes, over a 20-year period from 1986-87 to 2006-07, when adjusted for inflation, national expenditures per pupil rose 54 percent, from $7,603 to $11,674.[33]

To understand the true cost of public school expenditures, the average cost per student should include both operating and non-operating expenditures. Per-pupil costs have skyrocketed in Texas from $3,659 in 1987-88 to $11,024 in the 2007-08 school year, representing a 201 percent increase.[34*] In constant dollars, this still represents a significant increase of 66 percent, from $6,659 to $11,024 during the same time period.

* Current expenditure numbers are a year behind since it reflects actual expenditures and not budgeted expenditures. The most current data available is for the 2007-08 school year.

Figure 6: Texas State Budget Appropriations by Category, 2010-11

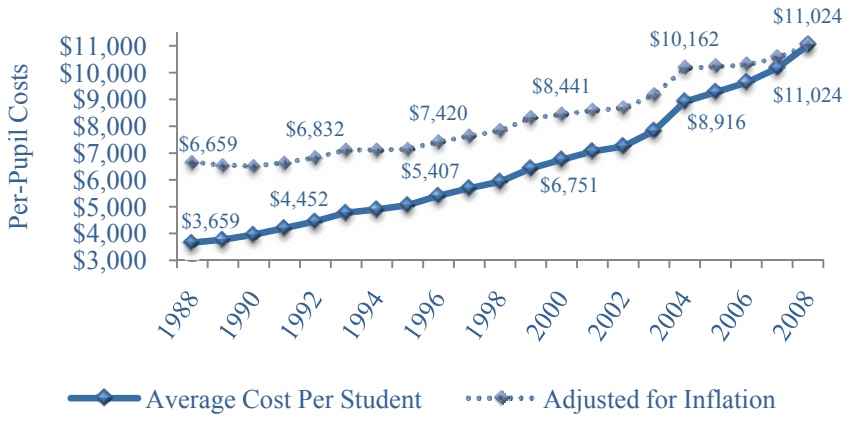


Source: Legislative Budget Board, "Fiscal Size-up 2010-2011 Biennium"
*Note: *Other includes the Judiciary, Legislature, Regulatory branches, American Recovery and Reinvestment Act, and General Provision articles.*

The CATO Institute recently reviewed Fiscal Year 2009 school district budgets and records for three school districts in Houston—Houston ISD, Spring Branch ISD, and North Forest ISD—and found that "the average real per-pupil spending figure of over $12,200 is 49 percent higher than the $8,200 the districts claim to spend."[35] The official public per-student spending figure for Houston ISD was $8,418 while the actual per-student spending figure was $12,534. Spring Branch ISD's official public per-student spending figure was $7,816 while the actual per-student spending figure was $11,412. The official public per-student spending figure for North Forest ISD was $9,050 while the actual per-student spending figure was $12,719.[36]

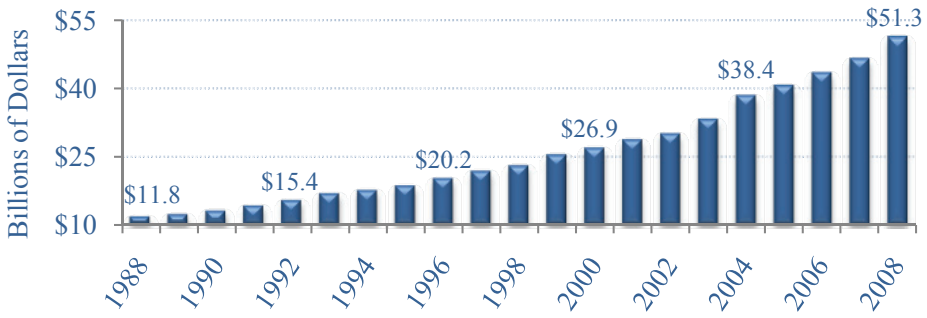
Over the last 20 years, total Texas public school expenditures increased 334.5 percent, an increase of 142 percent when adjusting for inflation. Texas public schools spent $51.27 billion in the 2007-08 school year. The Texas Education Agency forecasts that total expenditures will be $55.41 billion in 2009 and $57.37 billion in 2010.

Figure 7: Texas Expenditure Growth Per Student



Source: Texas Education Agency, "State Snapshots 1988-2008"

Figure 8: Total Actual Public School Expenditures in Texas



Source: Texas Education Agency, "State Snapshots 1988-2008"

Moreover, the cost of teacher pensions are often left out of the equation when calculating total public education costs. For the 2010-11 state budget, Texas lawmakers appropriated $1.377 billion for Fiscal Year 2011 and $1.427 billion for Fiscal Year 2012 in General Revenue for retirement contributions to public education employees. The current state contribution rate to current public education personnel is 6.40 percent of payroll for each fiscal year. In addition, the 2010-11 state budget includes $255 million for Fiscal Year 2011 and $268 million for Fiscal Year 2012 in General Revenue for the Texas Public School Retired Employees Group Insurance Program.[39]* **Table 7** shows data from 1999 to 2009 on state expenditures to Texas Teacher Retirement for teacher pensions and health insurance.

Table 7: State Contributions to Texas Teacher Retirement Funds Not Included in Public Education Expenditures, 1999-2009

Year	Pension Trust Fund	Health Insurance Funds
1999	$977,345,552	$76,488,424
2000	$1,090,716,271	$85,476,139
2001	$1,142,792,114	$166,366,888
2002	$1,201,257,586	$380,271,220
2003	$1,239,070,201	$265,001,861
2004	$1,241,789,167	$454,791,657
2005	$1,257,671,695	$266,569,733
2006	$1,332,101,481	$215,666,940
2007	$1,471,131,358	$238,190,720
2008	$1,451,028,429	$234,039,561
2009	$1,481,843,941	$245,611,097

Source: Teachers Retirement System, Annual Reports 1999-2009

* Neither the state retirement contributions or the state contributions for retired health insurance include the operating costs of the Teacher Retirement System of Texas (TRS).

Types of Expenditures

School districts have all types of expenses ranging from personnel costs and transportation to maintenance of facilities. Expenditures are categorized as current operating or non-operating expenditures.

- **Operating expenditures** include things such as teacher salaries, administrator salaries, health insurance payments, utilities, professional and contracted services, supplies and materials.

- **Non-operating expenditures** include construction of new facilities, remodeling of facilities, community services,* and repayment of debt from bonds.[40]

Total expenditures are divided into four categories—payroll costs, other operating costs, debt service, and capital outlay. The Texas Education Agency defines[41] these as follows:

- **Payroll Costs:** gross salaries or wages and benefit costs for all employees.

- **Other Operating Costs:** services rendered to school districts by firms, individuals, and other organizations; supplies and materials, including fuel for vehicles; other reading materials (not including the cost of state-adopted textbooks); food service supplies; and other expenses necessary for the operation of the school district.

- **Debt Service:** all expenditures for debt service including the retirement of debt and bond principal, and all interest expenses.

- **Capital Outlay:** expenditures for fixed assets, such as land, buildings, and equipment.

One notable trend in spending is that the United States spends more on facilities and buildings than OECD developed countries, on average. The 2009 OECD analysis of education spending finds that "[t]he United States spends an above-average share of its educational spending in primary and secondary education on *capital investments* as well as for the *compensation of non-teaching staff* [emphasis added]."[42]

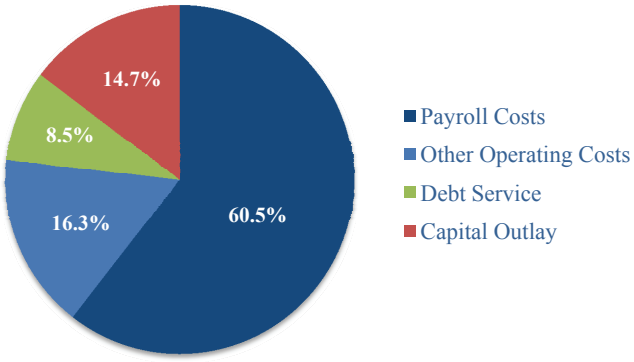
In Fiscal Year 1990, public schools nationwide spent $19.5 billion on facilities and construction. By Fiscal Year 2002, that number increased to $43 billion.

Data from the National Center for Education Statistics demonstrates a sizeable increase in expenditures on facilities. In Fiscal Year 1990, public schools nationwide spent $19.5 billion on facilities and construction. By Fiscal Year 2002, that number increased to $43 billion. This represents an adjusted-for-inflation increase of 121 percent from 1990 to 2002.[43] The per-student cost of facilities and construction increased 88 percent over this time period from $481 per student in 1990 to $903 per student in 2002.[44]

In Texas, this trend continues. Public elementary and secondary schools spent $2.2 million on acquiring facilities and construction in Fiscal Year 1990. Facility acquisition and construction expenditures rose to almost $5 million in Fiscal Year 2002. During this time period, the adjusted-for-inflation expenditures grew by 128 percent, slightly higher than the U.S. growth rate. Data from the Texas Education Agency shows that capital outlay expenditures accounted for 14.7 percent of Texas' total public school expenditures during the 2007-08 school year as shown in **Figure 9**, next page.[45]

* Community services are activities or purposes other than regular public education that relate to the whole community, such as the operation of a school library, swimming pool, and playgrounds for the public. Community services expenditures are shown as a stand-alone amount and are not included in total operating expenditures.

Figure 9: Texas' Actual Public School Expenditures, 2007-08



Source: Texas Education Agency, ""Academic Excellence Indicator System"

Student Achievement

The United States is outperformed by many other developed countries in math and science—scoring significantly below the OECD average in both math and science according to the results of the 2006 Programme for International Student Assessment (PISA). The United States was ranked 25th in math and 24th in science out of 30 OECD countries as show in **Table 8.**

Students in industrialized countries around the world take the PISA examination at age 15. Every three years the Organisation for Economic Co-operation and Development administers the test to between 4,500 to 10,000 students per country to measure student achievement. Reading, mathematics, and scientific literacy "are covered not merely in terms of mastery of the school curriculum, but in terms of important knowledge and skills needed in adult life."[46] Due to low student achievement on a global scale, these rankings have incited concern and led to calls for better math and science instruction.

Nationally, U.S. student achievement has remained stagnant over the past several years. Scores on college admissions tests such as the ACT have shown little improvement between 1990 and 2009. In 1990, the nationwide ACT composite score average was 20.6, while in 2009 the average score rose to 21.1 out of a maximum score of 36.[47]

Table 8: Developed Nations Rank in Math & Science, 2006

Mathematics	Science
1 Finland	1 Korea
2 Korea	2 Finland
3 Netherlands	3 Canada
4 Switzerland	4 New Zealand
5 Canada	5 Netherlands
6 Japan	6 Australia
7 New Zealand	7 Switzerland
8 Belgium	8 Belgium
9 Australia	9 Japan
10 Denmark	10 Ireland
11 Czech Republic	11 Sweden
12 Iceland	12 Denmark
13 Austria	13 Poland
14 Germany	14 Germany
15 Sweden	15 Austria
16 Ireland	16 Czech Republic
17 France	17 United Kingdom
18 United Kingdom	18 Iceland
19 Poland	19 France
20 Slovak Republic	20 Norway
21 Hungary	21 Hungary
22 Luxembourg	22 Luxembourg
23 Norway	23 Slovak Republic
24 Spain	**24 United States**
25 United States	25 Spain
26 Portugal	26 Portugal
27 Italy	27 Italy
28 Greece	28 Greece
29 Turkey	29 Turkey
30 Mexico	30 Mexico

Source: Organisation for Economic Co-operation and Development, 2006

Figure 10: Texas NAEP Progress by Demographic, 4th Grade Reading

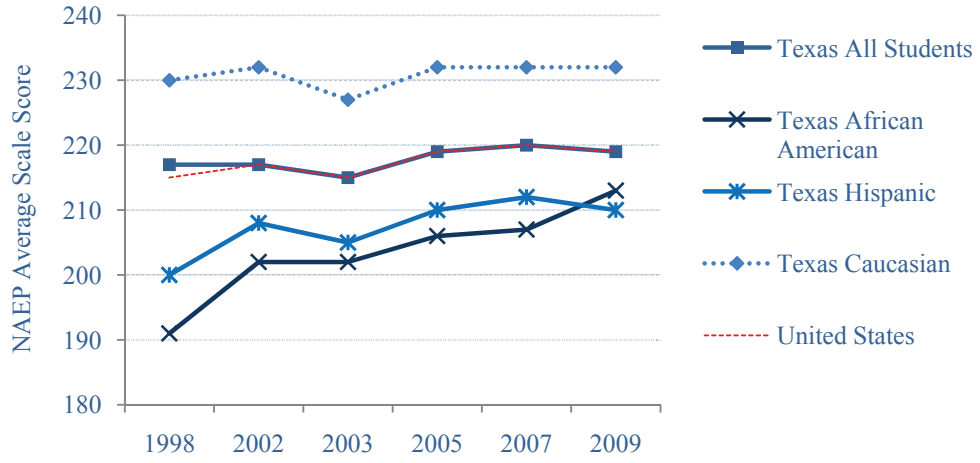
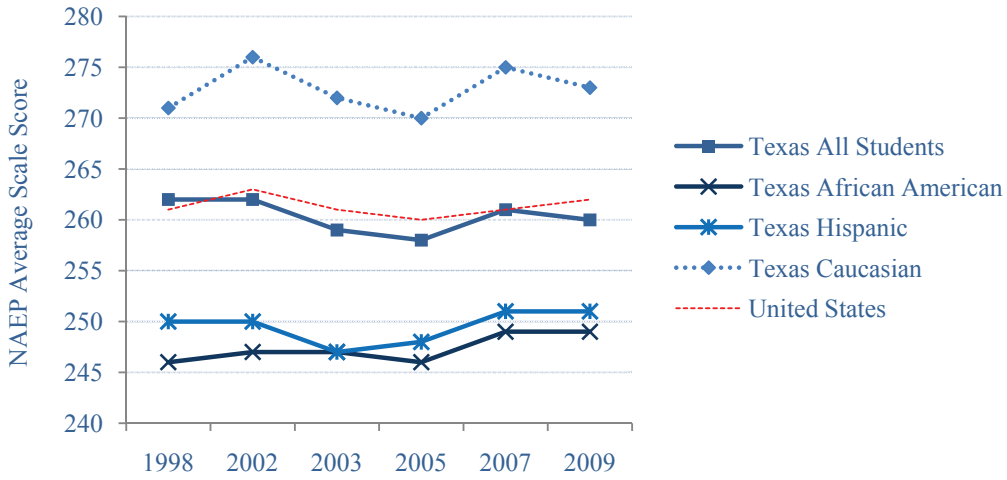


Figure 11: Texas NAEP Progress by Demographic, 8th Grade Reading



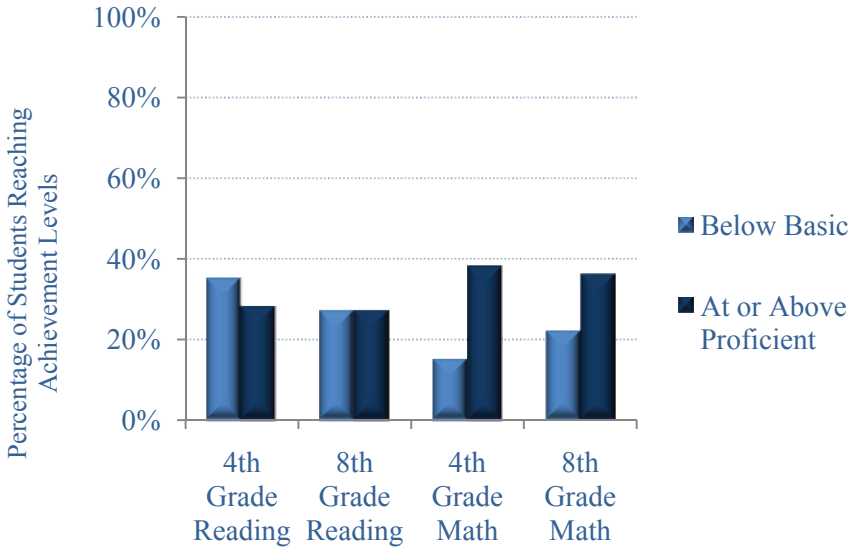
Source: U.S. Department of Education, National Center for Education Statistics, "Texas State Profile"

Figure 15 (page 20) shows how Texas' education growth has not resulted in improvement in student ACT scores, while per-pupil expenditures have seen higher growth rates over the same period of time.

Student scores on the National Assessment for Educational Progress (NAEP), often called the Nation's Report Card, have not shown significant signs of improvement on a national level either. According to a 2009 report by The Cato Institute:

"NAEP math scores declined from the early 1970s through the early 1980s. Overall, math scores are statistically unchanged over the past three decades. In science, a striking decline occurred through the early 1980s from which scores never fully recovered. At the end of high school, student performance is statistically significantly worse in science today than it was when the NAEP test was first administered in 1969-70."[48]

Figure 12: Texas Student Proficiency: 2009 NAEP Reading & Math Achievement



Source: U.S. Department of Education, National Center for Education Statistics, "Texas State Profile"

Texas follows this trend of stagnant student achievement, according to the results of the NAEP test scores. As shown in **Figures 10 and 11**, average reading scores for Texas fourth grade students have only increased by 0.92 percent, while Texas eighth grade student reading scores have actually *decreased* by 0.76 percent from 1998 to 2009. Compared to overall U.S. NAEP achievement, Texas students have higher scores, despite relatively little growth over time on a state and national level.

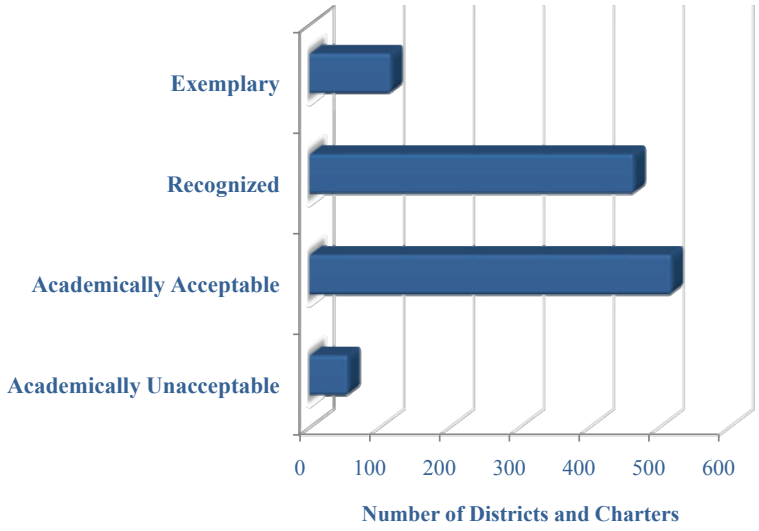
The trend is similar for student performance in mathematics. **See Figure 12** for a comparison of student proficiency between the two subjects.

In addition, while Texas' standardized test, the TAKS (Texas Assessment of Knowledge and Skills), asserts that 84 percent of fourth grade students met reading standards in 2009, data from the National Assessment of Educational Progress (NAEP) contradicts this claim.[49] The NAEP finds that only 28 percent of Texas fourth grade students are proficient in reading, while 35 percent are below basic. In math, only 38 percent of fourth graders are proficient in math and 15 percent are below basic. This trend does not improve for Texas eighth graders; 27 percent are proficient in reading while 27 percent are below basic. In math, 36 percent of eighth graders are proficient and 22 percent are below basic.[50]

The low percentages of proficiency in reading and math for Texas students in fourth and eighth grade—as demonstrated by national NAEP data—does not coincide with the general impression the public has of Texas public schools. According to Texas' public school accountability system, 61.3 percent of all Texas public schools are rated either *Exemplary* or *Recognized* (the two highest ratings).[51] The differences between what the national data demonstrates and what state data asserts raises questions. Are Texas parents, taxpayers, and policymakers are being given a false impression of the quality of Texas public schools? **See Figure 13.**

The low percentages of proficiency in reading and math for Texas students in fourth and eighth grade—as demonstrated by national NAEP data—does not coincide with the general impression the public has of Texas public schools.

Figure 13: 2009 Texas Accountability Ratings for School Districts and Charter Schools

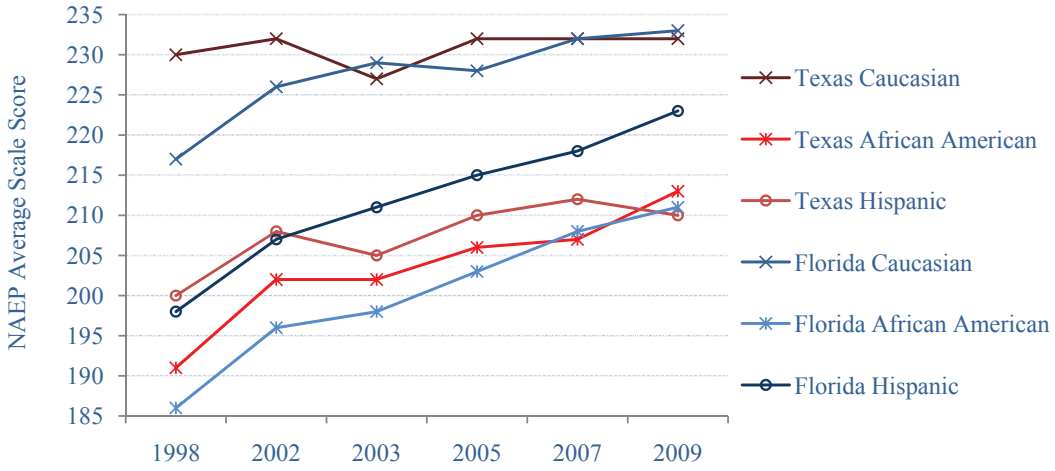


Source: Texas Education Agency, 2009 Accountability Ratings

Another matter to consider is how certain subgroups are performing compared to those same subgroups in other states. As shown in **Figure 14**, Hispanic fourth grade students in Florida are outperforming Hispanic fourth grade students in Texas.

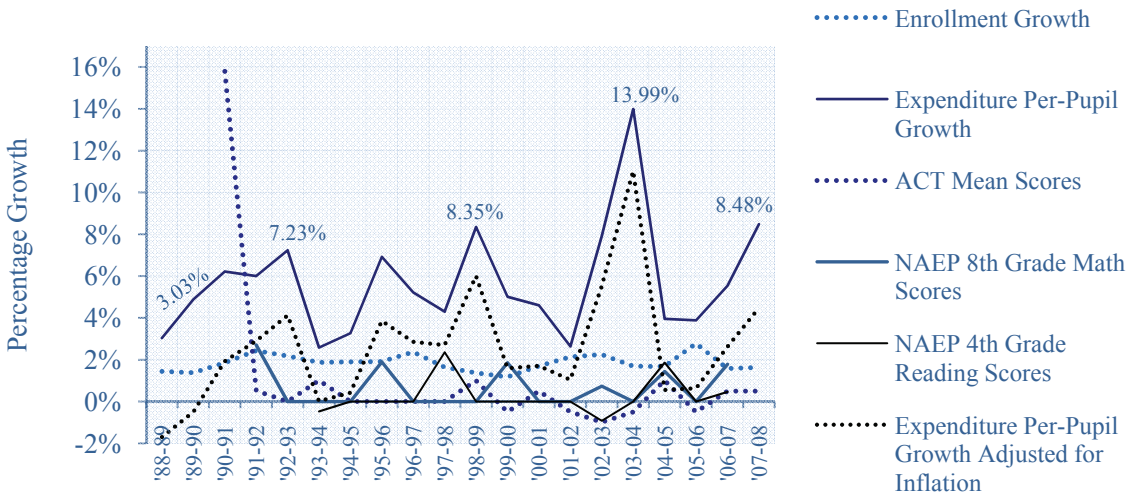
Overall, Texas student achievement has remained fairly stagnant over the last 20 years. For a comparison of spending and student achievement in Texas public schools, see **Figure 15,** next page.

Figure 14: NAEP Progress by Demographic, 4th Grade Reading Scores for Florida & Texas



Source: National Center for Education Statistics, "Texas State Profile"

Figure 15: Texas Education Growth



Source: National Center for Education Statistics, "Texas State Profile"

As documented in the various charts and figures above, Texas public education spending has skyrocketed over the last 20 years without a corresponding increase in student achievement. Total Texas public education expenditures are higher than most policymakers realize, as total education spending includes debt and building costs. Texas has more public school employees than any other state, and the number of Texas school personnel has grown at a much higher rate than student enrollment.

Recommendations

Spending

- Do not increase spending for public schools. Instead, encourage school districts to find efficiencies;
- Make education spending more transparent at the state and local level; and
- Have state funding follow the students to their specific school and not stay at the district level, thereby empowering school leaders to have discretion over their entire school budget and the ability to make decisions about the need for various expenditures.

Regulations

Reduce or remove any regulations at the state and local level that increase the cost of education, hinder innovation, and do not lead to higher student achievement, such as:

- State minimum salary schedule;
- Locally-adopted salary schedules;
- Paying teachers more for an advanced degree;
- Multi-year contracts;
- Teacher tenure;
- Class size mandates; and
- Teacher certification restrictions.

School Choice

- Create a statewide open-enrollment policy for students to attend any public school of their choice in Texas, regardless of their address;
- Eliminate the charter school cap, allowing more students to attend their public school of choice;
- Create an education tax credit scholarship program so students can receive scholarships to attend the school environment of their choice (public, private, homeschool); and
- Increase access to distance learning by removing the limit on two courses per student and removing restrictions that limit distance learning to students whose school district participates in the network. ✯

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