

Kansas K-12 Spending and Achievement Comparison

Executive Summary

This report is the latest look at the history of enrollment, spending, and achievement in Kansas public schools using information from the Kansas State Department of Education, the U.S. Department of Education and the U.S. Census Bureau. Since the 1993-94 school year, a benchmark that has been used in earlier editions of this paper, changes in student enrollment have been modest but school funding and spending have grown much faster.¹

There are four key measurements of student performance: mathematics in fourth and eighth grade, and reading in fourth and eighth grade. Of those four, Kansas schools do best on fourth-grade mathematics. Between 2000 and 2003, the percentage of fourth-grade students scoring proficient or better on the mathematics test jumped from 28 to 42 percent. There has not been any statistically significant improvement since then, however. At the eighth grade level, proficiency jumped from 34 to 41 percent between 2005 and 2007, but the 2009 test showed no improvement. Reading scores, by contrast, have showed no improvement at either grade level. In 2009, as in 1998, just over one-third of students were proficient at reading.

Summary Findings

- **Per-Pupil Funding** (source: Kansas Dept. of Education)

	1993-'94	2008-'09	% Change
State aid per-pupil	\$3,359	\$7,344	118.6%
Local aid per-pupil	\$2,314	\$4,392	89.8%
Federal aid per-pupil	\$314	\$924	194.3%
Total aid per-pupil	\$5,987	\$12,660	111.5%

- **Enrollment** (source: Kansas Dept. of Education)

	1993-'94	2008-'09	% Change
Full time equivalent students	437,201.1	447,615.1	2.4%

- **Total Spending (millions)** (source: Kansas Dept. of Education)

	1993-'94	2008-'09	% Change
State of Kansas	\$1,468.6	\$3,287.2	123.8%
Local taxpayers	\$1,011.9	\$1,965.9	94.3%
U.S. Dept. of Education	\$137.3	\$413.6	201.2%
Total aid per-pupil	\$2,617.8	\$5,666.7	116.5%

- **2009 National Assessment of Education Progress (NAEP)**

(source: U.S. Dept. of Education)

	Grade 4	Grade 8
Mathematics: % students proficient or better	46%	39%
Reading: % students proficient or better	35%	33%

- **Kansas Department of Education definition of 'Meets Standard' is equivalent to NAEP's definition of 'Basic.'**

¹ The current funding system was put in place in 1993.



Introduction

School spending is never far from the legislative agenda or from the interests of Kansas families and taxpayers. In light of calls for increased funding at both the state and local level, it is important to examine the history of spending and achievement. Are spending and achievement linked, and if so, how? That's perhaps the most contentious issue in education.

Harold Wenglinsky of Educational Testing Service has concluded that increased per-pupil spending that results in smaller classes improves student performance. Other scholars such as Deborah Verstegen of the University of Nevada and Richard King of the University of South Florida say the same thing, though others, such as Eric Hanushek of the Hoover Institution caution that the link is at best ambiguous.

There is also a Kansas study that says "recent changes to school funding in Kansas reveal little evidence of improving student outcomes as measured by test scores."² Dr. Florence Neymotin, an Assistant Professor of Economics at Kansas State University and a Visiting Research Fellow with the Center for Applied Economics at the University of Kansas, conducted the study. She describes it as "...the first-ever economic analysis of the most recent amendments to the School District Finance and Quality Performance Act on student outcomes." Her research did find "weak evidence" of improved graduation rates.

Education industry insiders, such as the Kansas chapter of the National Education Association and the Kansas Association of School Boards, call for

"suitable" funding, implying that unsatisfactory performance is caused by inadequate funding. The group Kansas Families for Education, which has supported school district lawsuits against the state, cites the Kansas Legislative Division of Post Audit. It says that report says there is "a direct correlation between spending and student achievement." Yet that same report cautions, "Educational research offers mixed opinions about whether increased spending for educational inputs is related to improved student performance. Well-known researchers who have reviewed that body of research have come to opposite conclusions. Likewise, individual studies of specific educational inputs we reviewed sometimes concluded additional resources were associated with improved outcomes, and sometimes concluded they weren't. Because of perceived shortcomings in many of the studies that have been conducted in these areas, many researchers think more and better studies are needed to help determine under which circumstances additional resources actually lead to better outcomes"³

The question of whether spending drives achievement was most recently addressed in the U.S. Department of Education's response to Kansas' Race to the Top application. One reviewer said that funding increased in 2005 but there was no evidence that it resulted in increased student achievement, graduation rates or narrowed achievement gaps.⁴

There may never be universal agreement but one way to answer the question is to look at the history of both spending and achievement in Kansas.

² Dr. Florence Neymotin, "The Relationship Between School Funding and Student Achievement in Kansas Public Schools," December 2008, Center for Applied Economics at the University of Kansas. Accessed on Dec. 28, 2009 at (http://www.business.ku.edu/_FileLibrary/PageFile/1041/TR08-1205—EducationSpending_Neymotin.pdf).

³ Harold Wenglinsky, "How money matters," *Sociology of Education*, 1997, Vol. 70 (July): 221-237; Deborah A. Verstegen and Richard A. King, "The Relationship Between School Spending and Student Achievement," *Journal of Education Finance*, Vol. 24 n2 p243-62 Fall 1998. Eric A. Hanushek, "Schoolhouses, Courthouses, and Statehouses," Princeton University Press, 2009. Kansas Families for Public Education, "Talking Points," available online at <http://www.fundourpublicschools.com/index.php?page=voterinfo>, accessed on August 20, 2010. Kansas Legislative Division of Post Audit, "Cost Study Analysis: Elementary and Secondary Education in Kansas: Estimating the Costs of K-12 Education Using Two Approaches," January, 2006, p. 107.

⁴ Kansas Department of Education, Summary of Race to the Top Reviewers' Comments; accessed August 20, 2010 at http://www.ksde.org/LinkClick.aspx?fileticket=wPCRT_eujx0%3D&tabid=2880&mid=10008.

Enrollment Trends

The most comprehensive picture of spending on schools can be found in “Total Expenditures by District,” an annual report published by the Kansas State Department of Education (KSDE).⁵ It tracks spending in over 30 fund categories, ranging from the obvious and large (general funds) to the relatively small and obscure (tuition reimbursement). KSDE staff prepare the report using information they receive from school districts, vetting the numbers so that money transferred among various funds is not double counted.

School Year	FTE Enrollment
'93-94	437,201.1
'94-95	440,684.2
'95-96	442,456.9
'96-97	445,767.3
'97-98	448,609.0
'98-99	448,925.7
'99-00	448,610.3
'00-01	446,969.9
'01-02	445,376.6
'02-03	444,541.4
'03-04	443,301.8
'04-05	441,867.6
'05-06	442,555.7
'06-07	444,878.7
'07-08	446,874.0
'08-09	447,615.1
15-yr. change	2.4%

Source: Kansas Department of Education

The first thing we need to consider in any discussion of school finance is the number of students. For financial reporting purposes, a common measure of student enrollment is the full-time equivalent (FTE) number of students.

Since 1993, the number of public school students in Kansas has increased and decreased from time to time, changing by an average of roughly one-third of one percent each

year. Between the 1993-94 and the 2008-09 school years, enrollment in Kansas schools increased a total of 2.4 percent, ending at 447,651. In other words, student demands on the public schools, as measured in enrollment numbers, have not changed much.

Spending More Than Doubled

School districts have three funding sources. State aid and federal aid both come 100% from tax dollars. The vast majority of Local revenue is derived from taxes but districts also have other local revenue, such as student fees.

In contrast with the nearly flat-line trend of student enrollment, school spending has risen sharply.

Traditionally, state and local governments have taken the lead in setting education policy. But in recent decades, national politicians of both major political parties have put a federal stamp on education. Consistent with the trend of more federal involvement in education, total federal aid to Kansas schools has gone up 201% over the last fifteen years, increasing from \$137.3 million in 1993-1994 to \$413.6 million for the 2008-09 school year and accounting for 7.3 percent of total school funding.

The largest portion of education funding, however, continues to come through state and local sources, accounting for 58.0% and 34.7% of total aid, respectively. State aid to schools increased 123.8%

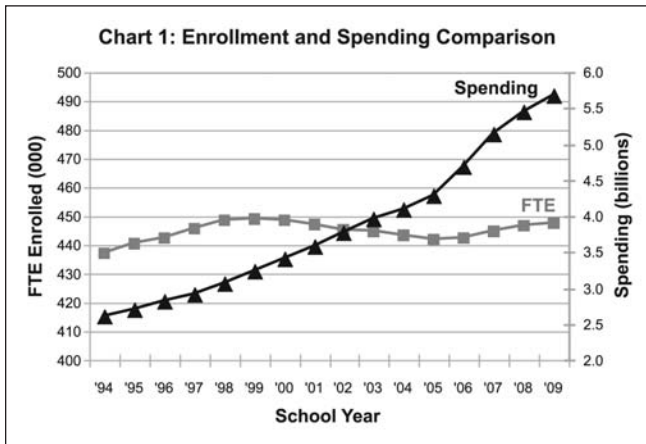
School Year	Revenue Source			Total Spending
	State	Federal	Local	
1993-94	1,468.6	137.3	1,011.9	2,617.8
1994-95	1,558.3	140.5	1,012.5	2,711.3
1995-96	1,604.9	150.3	1,061.9	2,817.1
1996-97	1,618.4	181.5	1,121.8	2,921.7
1997-98	1,815.7	189.1	1,058.4	3,063.2
1998-99	2,035.2	202.6	1,004.7	3,242.5
1999-00	2,110.5	220.8	1,071.4	3,402.7
2000-01	2,152.6	261.0	1,172.9	3,586.5
2001-02	2,200.5	310.1	1,269.9	3,780.5
2002-03	2,277.8	340.7	1,335.2	3,953.7
2003-04	2,124.0	376.9	1,592.6	4,093.5
2004-05	2,362.2	398.7	1,528.5	4,289.4
2005-06	2,658.0	382.8	1,648.5	4,689.3
2006-07	2,889.0	385.4	1,867.7	5,142.1
2007-08	3,131.5	377.0	1,937.9	5,446.4
2008-09	3,287.2	413.6	1,965.9	5,666.7
15-year change	123.8%	201.2%	94.3%	116.5%

Source: Kansas Department of Education

⁵ The Total Expenditures by District reports are available through Department of Education’s web site at <http://www.ksde.org/Default.aspx?tabid=1870>. The footnote of these reports discloses that all funds are included in the “Total Expenditures” column, and by extension, the funds included in this discussion. It also discloses that Local revenue is computed by determining the total expenditures minus state and federal aid.

over the last fifteen years, jumping from about \$1.5 billion to \$3.3 billion. Local aid increased 94%, going from just over \$1 billion to nearly \$2 billion.

Total spending from all revenue sources was nearly \$5.7 billion, up 116.5% from the \$2.6 billion that was spent in the 1993-94 school year. As shown in Chart 1, the school spending trend is remarkably different than the enrollment trend. While enrollment has fluctuated ever so slightly, spending has gone in one direction – up.



The combination of meager growth in student enrollment and significant growth in total aid to

School Year	Revenue Source			Total Spending
	State	Federal	Local	
1993-94	3,359	314	2,314	5,987
1994-95	3,536	319	2,298	6,153
1995-96	3,627	340	2,400	6,367
1996-97	3,631	407	2,517	6,555
1997-98	4,047	422	2,359	6,828
1998-99	4,533	451	2,238	7,222
1999-00	4,704	492	2,388	7,584
2000-01	4,816	584	2,624	8,024
2001-02	4,941	696	2,851	8,488
2002-03	5,124	766	3,004	8,894
2003-04	4,793	850	3,593	9,236
2004-05	5,346	902	3,459	9,707
2005-06	6,006	865	3,725	10,596
2006-07	6,494	866	4,198	11,558
2007-08	7,008	844	4,336	12,188
2008-09	7,344	924	4,392	12,660
15-year change	118.6%	194.3%	89.8%	111.4%

Source: Kansas Department of Education

schools means that per-pupil spending has dramatically increased. Per-pupil spending increased 111.4% since the 1993-94 school year, going from \$5,987 to \$12,660 per student.

To get another perspective on spending trends, consider what happens over the last four years of a typical student’s time in school. Take, for example, the class of 2003. In the 1998-99 school year, when this class was in eighth grade, state, local, and federal taxpayers spent \$7,222 on each student. Per-pupil spending went up the very first year this class entered high school, and kept going up each year after that, so by the time it graduated, Kansas schools were spending \$8,894 per student—an increase of 23% (Table 4).

4-year cycles	% Change
1999/00 – 2002/03	23%
2000/01 – 2003/04	22%
2001/02 – 2004/05	21%
2002/03 – 2005/06	25%
2003/04 – 2006/07	30%
2004/05 – 2007/08	32%
2005/06 – 2008/09	30%

What About Performance?

There are several ways of looking at student performance. One is the percentage of students who graduate on time. According to the Kansas Building Report Card, the state boasted a graduation rate of 90 percent for the 2008-09 school year.⁶

Independent sources, however, say the graduation rate is much lower. In 2008, Education Week, the industry standard of news reporting about education, published a report that called into question the validity of many published graduation rates. It found that during the 2003-04 school year (the latest year for which it had applicable data for all the states), the graduation rate in Kansas was 74 percent—far less than the 88 percent reported by the state for that year. Further, graduation rates for some specific groups of students were even lower: 55 percent for blacks, 46 percent for Hispanics,

⁶ Kansas State Department of Education, “Report Card 2007-2008,” online at http://online.ksde.org/rcard/state_grad.aspx?org_no=D%.

and 46 percent for American Indians.⁷ For the class of 2007, Education Week gave Kansas a graduation rate of 75 percent overall, with lower rates for minorities: 69 percent (Asian), 57 percent (black), 56 percent (Hispanic), and 50 percent (American Indian).⁸

Regardless of which graduation rate you use, it is a crude measurement, because it says nothing about what students actually learn. A better measurement of performance is the National Assessment of Educational Progress (NAEP), a test given in all states and supervised by the National Center for Education Statistics within the U.S. Department of Education.

Kansas has participated in the NAEP reading test since 1998 and in the mathematics test since 2000, letting us view the performance of Kansas schools through a third-party assessment. NAEP tests have two different ways of summarizing a state’s performance. The first is a scale score, which runs from 0 to 500 for each test. The official NAEP glossary also recognizes three achievement levels: basic, proficient, and advanced. (A student’s score may also be so low as to be “below basic.”) The levels, in the words of the official NAEP glossary, “measure what students should know and be able to do at each grade assessed.” Those who have reached the “proficient” level “have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.

A quick mention of the achievement levels may be useful.

BASIC: “denoting partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade assessed.”

PROFICIENT: “solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.”

ADVANCED: “superior performance at each grade assessed.”

The NAEP website provides further information on what student performance is expected for each subject, grade, and achievement level.⁹

• **Mathematics: Only Marginal Progress**

The average scale score for both fourth-grade and eighth-grade tests was only marginally higher in 2009 than it was in 2000. Likewise, the percentage of students who scored proficient or advanced was also higher in 2009 than it was in 2000. Fourth-grade performance made a remarkable gain between 2000 and 2003, with the portion of students scoring proficient or better jumping by 14

Table 5: Mathematics - Grade 4 (NAEP)

Scale scores and % of students in specific achievement levels

	2000	2003	2005	2007	2009
Score (500 max)	232	242	246	248	245
% Below basic	24	15	12	11	11
% Basic+	75	86	88	89	89
% Proficient+	28	42	47	51	46
% Advanced+	2	6	8	9	6
% Not proficient	71	59	53	49	54

Table 6: Mathematics - Grade 8 (NAEP)

Scale scores and % of students in specific achievement levels

	2000	2003	2005	2007	2009
Score (500 max)	283	284	284	290	289
% Below basic	24	24	23	19	21
% Basic+	76	76	77	82	79
% Proficient+	34	34	34	41	39
% Advanced+	5	6	5	9	8
% Not proficient	66	66	66	59	61

⁷ Christopher B. Swanson, “Cities in Crisis,” Education Week, April 1, 2008, available at www.edweek.org. See also “New District Graduation Map Tool,” also available at edweek.org.

⁸ EPE Research Center, “Graduation in the United States,” Education Week, June 10, 2010. See also www.edweek.org/go/dc10.

⁹ For more on the terms used in the NAEP, see U.S. Department of Education, “The NAEP Glossary,” available online at <http://nationsreportcard.gov/glossary.asp>.

percentage points, and the percentage peaked at 51 percent in 2007. But the state gave back some gains between 2007 and 2009, when the percentage dropped by 5 points. According to the latest test, just under half of fourth-grade students – 46 percent – scored proficient or better. Proficiency at the eighth-grade level, which never saw the same jump, hovers under 40 percent.

• **Reading: About the Same as 1998**

While Kansas has made a small amount of progress in mathematics, the same can't be said for reading. The 4th Grade scale score for 2009 was not significantly better than it was in 1998 and the 8th Grade score is a point lower. The percentage of students scoring proficient or better was only one point better for Grade 4 but three points lower for Grade 8.

As with mathematics, student proficiency declines between fourth- and eighth-grade tests. Of even greater concern is the fact that roughly two of every three students are reading below the proficiency level.

• **State Assessments**

Some people might take comfort in the more cheery results of state assessments, which regularly report that 70 to 85 percent of students “meet standards”). However, the Kansas Department of Education definition of ‘Meets Standards’ is much closer to NAEP’s definition of ‘Basic’ than ‘Proficient’.¹⁰

Meets Standard: 4th Grade Reading – When independently reading grade-appropriate narrative, expository, and technical text, a proficient student has **satisfactory** comprehension.

Exceeds Standard: 4th Grade Reading – When independently reading grade-appropriate narrative, expository, and technical text, an advanced student has **full** comprehension.

The same definitions apply to 8th Grade Reading. Since ‘full comprehension’ is required to ‘exceed standard’ only partial comprehension must be required to ‘meet standard,’ which is essentially the NAEP definition of ‘basic’ (partial mastery).

There’s also reason to believe that state assessment results are inflated, a problem that is not unique to Kansas. The Thomas B. Fordham Institute, the Northwest Evaluation Association, and the U.S. Department of Education have all said that states raise their official performance results by creating easy tests or only requiring low scores to qualify as having met standards. A student in Kansas could meet state standards and yet fail to be proficient on the NAEP. In a separate evaluation of state expectations, Paul E. Peterson and Frederick M. Hess, of Harvard University and the American Enterprise Institute, respectively, gave Kansas a “C-” for its proficiency standards in reading and a “C” for its standards in mathematics.¹¹

Table 7: Reading - Grade 4 (NAEP)

Scale scores and % of students in specific achievement levels						
	1998	2002	2003	2005	2007	2009
Score (500 max)	221	222	220	220	225	224
% Below basic	30	32	34	34	28	28
% Basic+	70	68	66	66	72	72
% Proficient+	34	34	32	32	36	35
% Advanced+	7	7	7	8	8	7
% Not proficient	66	66	68	68	64	65

Table 8: Reading - Grade 8 (NAEP)

Scale scores and % of students in specific achievement levels						
	1998	2002	2003	2005	2007	2009
Score (500 max)	268	269	266	267	267	267
% Below basic	19	19	23	22	19	20
% Basic+	81	81	77	78	80	80
% Proficient+	36	38	35	35	35	33
% Advanced+	2	3	3	3	2	2
% Not proficient	64	62	65	65	65	67

¹⁰ Kansas Dept. of Education, Reading – General Performance Level Descriptors; accessed August 23, 2010 at <http://www.ksde.org/Default.aspx?tabid=2377>.

¹¹ For a summary of the problems of conflicting standards of evaluation, see John R. LaPlante, “Does Kansas Grade Itself on the Curve?”, August 12, 2008, Kansas Policy Institute.

Dramatic Spending Growth Fails To Produce Results

Kansas has been following the same theory for a long time: pumping more money into the same approach is the way to achieve proficiency. Over the last ten years corresponding to the state's participation in NAEP, Kansans have increased per pupil spending by 79 percent, but the results have been dismal: modest improvements in mathematics, little improvement in reading ability and the majority of students still failing to perform at proficient levels. That is a failing grade by any measurement.

It's also important to examine how mathematics and reading scores have changed since 2005 – the year before the State began pumping hundreds of millions more into schools as a result of the last school lawsuit. Total aid to schools jumped \$1.4 billion between the 2005 and the 2009 school years (\$925 million of which came from the state) but test scores are essentially flat. The education lobby contends that higher spending causes achievement to rise but a 30% per-pupil spending hike over a 4-year period clearly made little difference in proficiency scores.

Continuing to follow the 'more money = greater proficiency' theory would only validate Einstein's definition of insanity: doing the same thing over and over and expecting a different result. 'Just spend more' isn't the answer but there are many options that have proved successful.

Kansans should demand change. The Legislature should liberate public schools from some of the red tape they now face, so they can reward teachers who find ways of improving student performance and empower administrators to dismiss teachers who are ineffective. The National Council on Teacher Quality recently released a study with specific recommendations for Kansas.¹²

Charter schools, which are already public schools, should be freed to be truly independent alternatives for students who would thrive in a different environment. One way of doing that is to create a competent, focused and independent organization for approving charter schools and holding them accountable, apart from school districts. Finally, private schools should be tapped, through tax credits or other measures, as another means of educating the next generation of Kansans.

Too much is at stake to continue business as usual.

About The Author

John R. LaPlante is an Education Policy Fellow with the Kansas Policy Institute. He has a Masters of Art in Political Science from The Ohio State University, where he studied the politics of economic development, social movements, and international relations. Mr. LaPlante has worked in the field of public policy since 1998, assisting lawmakers across the country in promoting consumer-driven, cost-effective solutions to the public issues of the day, particularly in regards to education. His commentaries have been widely published online and in publications such as the *The Wichita Eagle*, the *Minneapolis Star-Tribune*, the *Detroit News*, the *Hutchinson News*, and the *Salina Journal*.

¹² National Council for Teachers Quality, "2009 State Teacher Policy Yearbook," available at <http://www.nctq.org/stpy09/reports.jsp>



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