



Assessing School Spending and Student Achievement in Oklahoma

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Over the past two decades, Oklahoma's education system has mirrored the state economy, experiencing growth, prosperity, and recession. After Oklahoma appropriated \$4.9 billion to education in 2000, the state's school systems, for the most part, experienced growth in funding through the following decade, reaching a peak at \$7 billion in 2009. Then the recession hit and school funding felt the brunt of the economic blow. Between 2009 and 2014, Oklahoma public schools got the same level or even cuts in state funding. Since 2008, per-pupil spending has fallen by more than 23% (adjusted for inflation) — the deepest cut in the nation.

As Oklahoma's total educational funding dropped by 200 million dollars between 2009 and 2014, public schools faced other pressures — including a steady increase in the student population, totaling about 36,800 new enrollments — and the need to address new mandates from the state and federal governments that demanded more accountability and higher standards for students and educators alike. Political leaders and school administrators in Oklahoma have voiced concerns about insufficient funding and pleaded with the state for additional money — to little or no avail.

How have schools dealt with these cross pressures? In our research, we examine how schools in high achieving districts spend on instructional and administrative activities as compared to schools in other districts. We find that in order to increase student achievement, state policymakers should appropriate more funding for schools across the state and school administrators should prioritize instructional spending over administrative and other types of spending.

Instructional Spending and Student Achievement

Using a series of descriptive and inferential analyses, we examined the relationship between types of school district spending and student achievement. We explored the extent to which instructional, administrative, and other expenditures are able to predict a consistently high level of achievement across local school districts. We also examined whether districts with consistently high levels of achievement have significantly different expenditure patterns compared to other districts in the state.

Our results indicate that increased spending for instruction predicts higher levels of student achievement. This is true even though both high-achieving districts and other were quite similar in their levels of instructional spending — defined as the sum of salaries and benefits for teachers and instructional support staff. In fact, the districts classified as high achieving spent only \$51.66 more per student on instruction and instructional support. The difference in instructional spending amounts to less than one percent (0.7%) of the districts' total expenditures. It is remarkable that this small difference was statistically significant in predicting student achievement. If approximately fifty-two dollars per student can move a district into higher echelons of achievement, then how much more could an extra \$100, \$500, or even \$1,000 more per student boost instructional contributions to higher student achievement in schools across Oklahoma?

The Impact of Extra Administrative and Other Kinds of Spending

We also find that lower levels of student achievement are predicted by more administrative spending — defined as the sum of salaries for district superintendents, principals, and administrative support staff. According to our comparison, the districts that were not high achieving spent \$161.36 more per student for administrative costs. The difference in administrative expenditures equaled, on average, to 2.18% of the districts' spending. School districts at the top of the achievement continuum spent an average of two percent less on administration than districts that were not in the high achieving category.

In addition, high achieving Oklahoma school districts spent an average of \$90.33 more per student on services not included in administrative or instructional activities. But these other expenditures did not predict whether or not a district attained a high level of achievement.

Overall, we found that even a little extra instructional spending made a significant positive difference for student achievement, and more administrative had a significant negative effect. But we did not find any significant impact from more or less expenditure in the “other” category.

Recommendations for Educational Policymakers

Our research showed that, in a period of tight educational resources in Oklahoma, a small increase in instructional spending effectively separated the top five percent of school districts academically from the rest of school districts. This finding suggests that school administrators who want to boost student achievement should focus on boosting funding for instruction and instructional support. To make this possible, previous research supports the move toward elevating the base level of education funding as high as possible.

The fact that high-achieving districts spent an average of less than half of one percent more for instruction than the non-high achieving group would be noteworthy in any economic circumstances, but this finding is even more meaningful at a time when school districts face large overall budget limits and cuts. In any budget circumstances, this study suggests, lower-achieving districts should be able to match the proportions of overall school budgets devoted to instruction by higher-achieving districts.

What might need to get squeezed is administrative spending. Districts in the high achieving category spent an average of 8.2% of their money on administration, while the districts that were in lower performing districts spent an average of 10.3% of their funds on administration. This difference in percentages is worthy of further study, because across all Oklahoma schools the average proportion of administrative expenditures was 10.1%. Because higher administrative spending rates predicted poorer student test performance, schools currently on the higher end of this metric should consider cutting administrative costs and redirecting those funds into instructional spending.

Recommendations to Improve Oklahoma Student Performance

Beyond adjustments within tight budgets, state of Oklahoma should increase overall funding for education. Our study, like many before it, suggests that additional money would contribute positively to student achievement, especially if the districts use the funds to increase teacher pay and instructional support. Although the findings presented above are important for policymakers and schools administrators trying to stretch thin budgets, the reality is that the funding for all districts in this study was so austere that allocation differences between districts was fairly small. With budget ceilings so tight across the state, the smallest changes in allocations can have a significant effect. In the final analysis, both the total amount of money school districts receive and the ways money is allocated matter — and more than anything school districts can do a better job on student achievement by spending more on instruction and instructional support, either new money that comes from expanded budgets or by reallocating existing money within limited budgets.

Similar research conducted in Texas also finds that instructional expenditures had a positive relationship with achievement, and further specifies that a small difference in teacher compensation of about \$110 per pupil in a merit-based salary supplement yielded the most significant gains in student performance. Another study suggests that additional money for schools works best when it funds teacher incentives instead of simply raising the level of funding across the board. The use of incentive pay could be a solid investment for teachers and students across Oklahoma.

Oklahoma has room to improve teacher pay. The state ranked 49th in the United States in teacher pay while teachers in surrounding states earned approximately three thousand dollars more per year. That low ranking for teacher pay likely contributed to the teacher shortage experienced by Oklahoma during 2015 and 2016. Given our study's findings and the reality that schools are facing a teacher shortage, the use of merit pay and bonuses could help retain qualified and talented teachers in Oklahoma while increasing the odds of facilitating high achievement for students.

The reality for schools in Oklahoma is that the state may not be able to guarantee much additional money for education. With this reality in mind, it is up to the leaders of Oklahoma's school districts to adjust how they spend existing money, so that students will have adequate access to educational opportunity. Improving pay
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for effective teachers and devoting a greater share of available resources to instruction and instructional support appear to be the best way to deploy limited funds.

Read more in Jeffrey Maiden and Stephen Ballard "An Examination of Education Funding Adequacy and School District Spending Efficiency in Oklahoma," *Journal Of Education Finance*, (Under Review, 2019).