



## Did Funding Decline Cause Drop in Achievement Scores?

The recent release of 2011-2012 PSSA test results showed a decline in the statewide percentages of student scoring at the proficient or advanced level (-1.4 percent in math and -1.6 percent in reading). In a press release the State Secretary of Education noted the scoring decline was attributable to tightened security in the wake of an investigation of some adults who might have made changes to student answer sheets in previous years. Not unexpectedly, educational system apologists blamed the decline in PSSA scores on a reduction in educational spending.

The state's investigation into possible cheating covered the last three years of PSSA testing (2008-09 through 2010-11). According to the Secretary's press release 48 school districts and charter schools had been investigated with 30 cleared of any wrongdoing. Of the remaining 14 districts and four charter schools, four had their investigation closed, five had their investigation closed but remain on watch, and for the remaining nine, which includes the City of Pittsburgh, the investigation continues. We will focus only on the 14 districts that were not yet cleared of any wrongdoing.

It was also necessary to compile district spending data. The Department of Education has published the total expenditures for all districts from the 2010-2011 school year and prior, but does not yet have the data available for the 2011-2012 school year. To obtain last year's spending information for the 14 districts, we searched their websites. Thirteen of the 14 districts had the information available, so the focus will be on these 13 districts.

The four districts where the investigation was closed were Berwick Area (Columbia), Bethlehem Area (Northampton), Big Beaver Falls Area (Beaver), and New Kensington-Arnold (Westmoreland). Data on total expenditures from the 2009-10 school year to the 2011-12 school year is presented along with the change in PSSA scores from 2010-11 to 2011-12 school years.

District	Change in PSSA Scores*		Total Expenditures (in millions of dollars)		Percent Change in Total Expenditures
	Math	Reading	2011-2012	2010-2011	
Berwick	-11.6	-6.1	\$23.5	\$24.2	-2.90
Bethlehem	-3.5	-5.7	203.8	197.7	3.08
Big Beaver Falls	-3.3	-3.5	39.7	36.6	8.46
New Ken.-Arnld	-3.2	0.2	30.8	32.3	-4.65

\*percentage of students scoring at proficient or higher level

These four districts mostly had decreases to their math and reading scores (the exception is New Kensington-Arnold whose reading scores were basically unchanged). However, none of them were among the worst changes in the state. But the results are mixed for total expenditures as two districts had increases while two had decreases. If the claims that reduced expenditures reduce PSSA scoring then the results would have been unanimously negative. Note that Big Beaver Falls had a substantial boost in spending but saw both math and reading scores fall.

There were four districts where the investigation was closed, but will continue to be monitored. They are: Delaware Valley (Pike), Derry Area (Westmoreland), School District of Lancaster (Lancaster), and the School District of the City of Monessen (Westmoreland). However of these four districts, only Monessen did not have budget information for the 2011-2012 school year on their website and thus will be omitted from the analysis.

District	Change in PSSA Scores		Total Expenditures (in millions of dollars)		Percent Change in Total Expenditures
	Math	Reading	2011-2012	2010-2011	
Delaware Valley	-1.2	-2.8	\$68.1	\$68.6	-0.7
Derry Area	0.8	-1.3	30.4	29.2	4.1
Lancaster	0.5	-0.8	159.0	163.2	-2.6

For these three districts the results are again mixed. While Delaware Valley had decreases to both the math and reading scores, the reduction to expenditures was less than one percent—basically flat. Both Derry and Lancaster had mixed results. They both had small increases to their math scores—but less than one percent—while having small decreases to their reading scores. Derry had an increase to their total expenditures while Lancaster had a decrease. Again the data show no uniform correlation between spending and PSSA results.

Finally, there are six districts, among the largest in the state, that remain under investigation. They are: Harrisburg City (Dauphin), Hazleton Area (Luzerne), School District of Philadelphia, Pittsburgh School District (Allegheny), Reading School District (Berks), and Scranton School District (Lackawanna).

District	Change in PSSA Scores		Total Expenditures (in millions of dollars)		Percent Change in Total Expenditures
	Math	Reading	2011-2012	2010-2011	
Harrisburg	-2.1	-0.4	\$124.2	\$127.2	-2.4
Hazleton	-8.1	-8.3	117.2	114.0	2.8
Philadelphia	-8.6	-7.0	2,819.0	2,901.8	-2.9
Pittsburgh*	-3.8	-1.9	529.8	528.9	0.01
Reading	-5.0	-4.5	212.9	229.9	-7.4
Scranton*	-6.6	-5.0	116.5	121.0	-3.7

Note: Both the Pittsburgh and Scranton School Districts have budgets that follow the calendar year.

This collection of districts posted decreases in scores to both math and reading from the previous year levels. While four of the six spent less in the latest school year, the data

does not support the argument that declining spending was the major factor in poorer test results. Hazleton, with the largest combined percentage score decrease had a pickup in spending. Pittsburgh spending was flat but saw significant PSSA score declines, especially large drops in some of the high schools. Moreover, the scoring drops in Philadelphia and Scranton seem to be disproportionately large relative to the spending cuts.

In short, the evidence for the school districts that have been subjects of inquiry for possible improprieties regarding PSSA testing provides no support to the claims that spending decreases are the most likely factor in the fall off in student PSSA performance. A broader study underway but not yet published provides support for this finding. We looked at a sample of 27 districts across the state that contained the districts showing the greatest improvements in PSSA results as well as those with the biggest drop in scores. Most districts with large decreases to either the reading or math portion of the PSSA exam had increases to total expenditures while most of the districts with the largest increases to the test scores had decreases to their expenditure levels. Once more data becomes available, a more comprehensive report will be released.

Obviously, in several districts the increased security with respect to test taking and reporting could have been a significant determinant in lower scores. Indeed, just the fact that districts were aware of the Education Department's concern and stepped up vigilance might well have had an impact. Moreover, no doubt there are several variables in this situation that may well have been important in specific school districts.

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