Strategic School Funding for Results (SSFR)
Resource Allocation Analysis Brief #1 (PUSD)

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Introduction

This **Analysis Brief** shows how per-pupil spending varies with student poverty (as measured by the percent of students eligible for free or reduced price lunch) across elementary, middle, and high schools in Pasadena Unified School District (PUSD). We have carried out separate analyses that make use of the California Standardized Account Code Structure (SACS) to identify expenditure along the following three dimensions:

- **Expenditure by Revenue Source.** The first analysis investigates unrestricted versus restricted (categorical) resources with an emphasis on how dollars break out according to the targeted student populations the latter are intended to support (students eligible for free or reduced price lunch, designated as English language learners, receiving special education services, low performers, etc.)
- **Expenditure by Object.** The second analysis shows how per-pupil expenditures in the five following object categories varies across schools: salaries, benefits, books and supplies, and other (services, capital outlay and other outgoing).
- **Expenditure by Function.** The last analysis documents the variation across schools in per-pupil expenditures by four function categories: administration, instruction, pupil support, and miscellaneous (ancillary services, community services, plant services, and other outgoing).

The majority of the demographics data (all but special education) were obtained from the California Basic Education System maintained by the California Department of Education (CDE). The special education figures and fiscal data used in these analyses were provided by the PUSD central office, the latter of which includes expenditures at the school level identified according to SACS. All analyses have been run separately at the elementary, middle and high school levels, respectively.

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Highlights

The results produced by all three analyses indicate that there is no clear relationship between per-pupil expenditures and student need as measured by student poverty. The following are some highlighted examples.

- Looking at per-pupil expenditures by targeted student population (poverty, English learners, etc.) at the elementary level, we observed that schools with similar poverty levels (around 90 percent), had per-pupil expenditures ranging from $5,708 to $8,841. Furthermore, there were instances of schools with quite different poverty rates (e.g., 52 percent compared to 92 percent) that exhibited rather comparable restricted per-pupil expenditures.
- With respect to per-pupil expenditures broken out by object (certificated salaries, classified salaries, etc.), we observed that two of the district's three middle schools with similar levels of student poverty, about 14 percent, had a difference in certificated personnel salaries of almost $700 per pupil.
- When observing patterns of expenditure by function (administration, instruction, pupil support services, etc.) at the high school level, we observed that one high school with 81 percent of students eligible for free and reduced lunch spent $500 less per pupil on instruction and $300 less per pupil on administration compared to a school with a poverty rate that was 18 percentage points lower.

Per-Pupil Expenditures by Revenue Source

This first analysis examines the relationship between per-pupil expenditures and student poverty by looking first at expenditures made with restricted (categorical) versus unrestricted per-pupil expenditures, and then focuses on how the categorical resources are broken out according to the targeted student populations these funds are intended to support. To do this, the restricted expenditures were first mapped to the following five different student need categories based on the intended student population each funding source was targeted to: poverty, English learners, special education, low-performers, and all students (for those categorical funds thought to benefit all students). Next, we calculated per-pupil expenditures in each category by dividing expenditures by the total school enrollment. Finally, the schools were sorted by percentage of students eligible for free and reduced price lunch and per-pupil expenditures charted to allow a comparison of school-level expenditure by student poverty. This analysis was conducted separately by schooling level (i.e., elementary, middle and high). As mentioned above, the expenditure and special education data was provided by the PUSD central office, with the remainder of the demographics being obtained from CBEDS.

Selected Elementary School Findings
There does not seem to be a clear relationship between expenditures per-pupil and student poverty for elementary schools.

- Roosevelt Elementary and Loma Alta Elementary had the highest overall per-pupil expenditures, around $8,850, however they differed substantially in their proportion of students in poverty and in students identified as English language learners. While Roosevelt had 90 percent of its student body eligible for free and reduced lunch and 37 percent of English learners, Loma Alta had only 74 percent and 15 percent of its students in these categories.
- In a similar vein, schools with very similar levels of student poverty and English language learners had quite different overall per-pupil expenditures. For example, Roosevelt Elementary and Jackson Elementary, both with approximately 92 percent of their students eligible for free and reduced lunch and 35 percent of English language learners, had a $2,000 difference in overall spending.

Looking at restricted resources, we also observe that there is no clear relationship between per-pupil expenditures and student poverty.

- For example, Jackson Elementary and Hamilton Elementary (with 92 and 52 percent of students in poverty, respectively) had almost the same amount of categorical per-pupil expenditures, approximately $1,610.
- Also, Roosevelt and Altadena, with similar levels of poverty levels, around 90 percent, had quite different categorical per-pupil expenditures. The former spent $4,766 and the latter spent $1,000 less. This represents a relative difference of 25 percent.

With respect to categorical resources targeted to different student populations, the graph also shows no straightforward association between per-pupil expenditures and poverty levels.

- Jackson Elementary and Hamilton Elementary have somewhat similar patterns of restricted per-pupil expenditure. They both spent about $620 per-pupil in categorical resources targeted to impoverished students and about $580 on all students, but they differ in the categorical resources targeted towards low-performing students. Hamilton Elementary spent $128 dollars, where as Jackson Elementary spent about $200 dollars more per-pupil in this category.
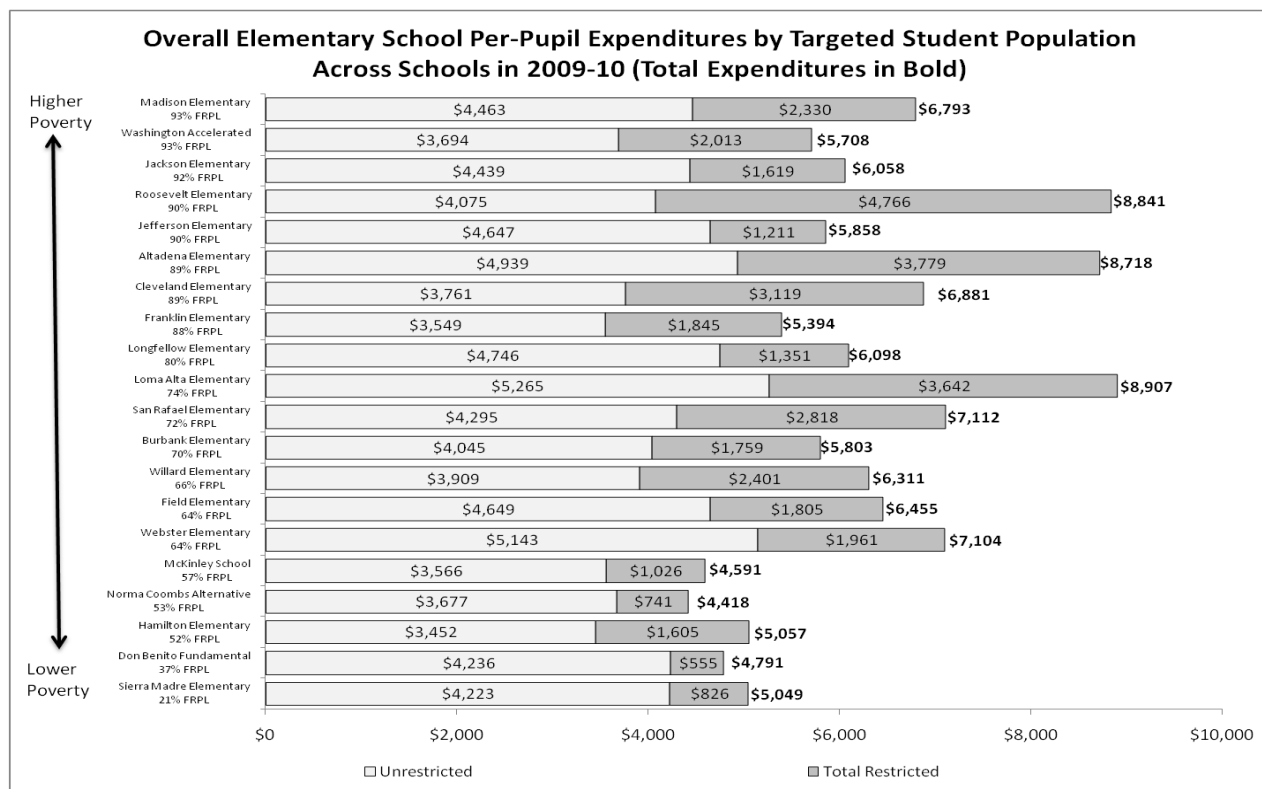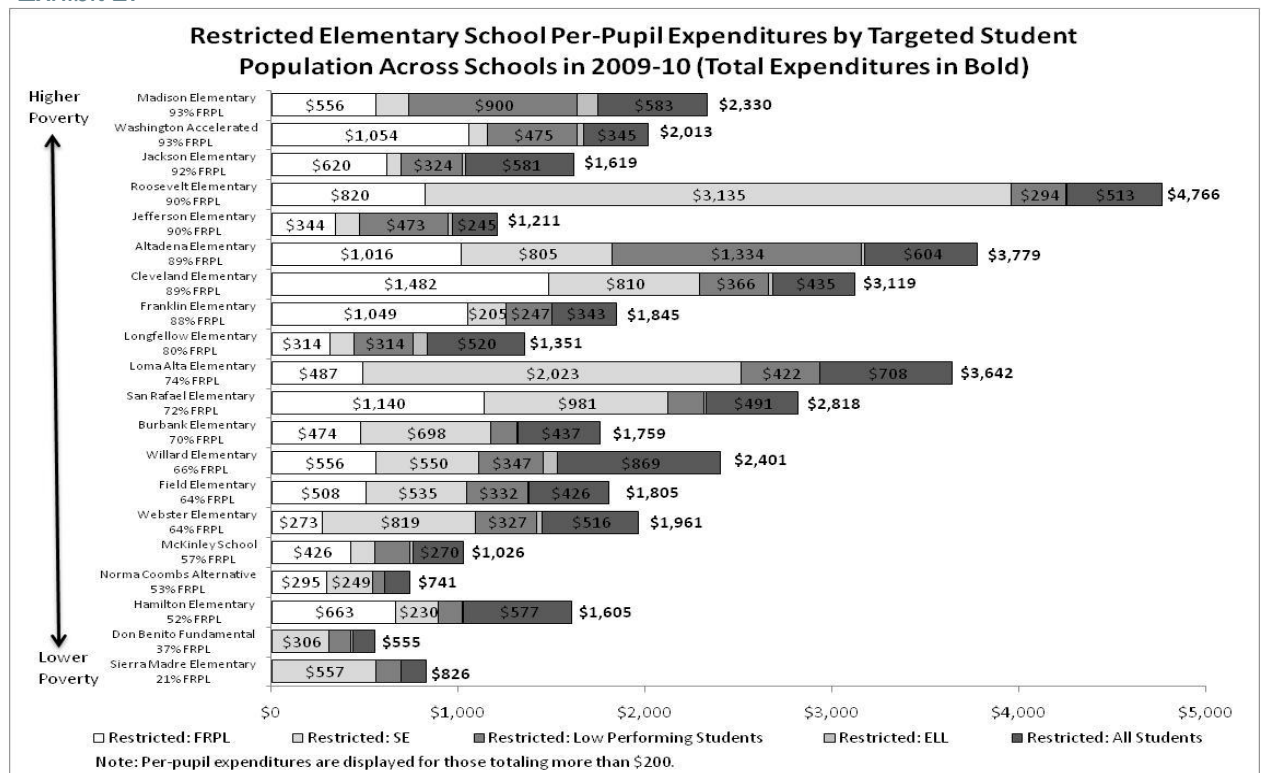
Exhibit 1.

Overall Elementary School Per-Pupil Expenditures by Targeted Student Population Across Schools in 2009-10 (Total Expenditures in Bold)

School	FRPL	Unrestricted	Total Restricted	Total
Madison Elementary	93%	$4,463	$2,330	$6,793
Washington Accelerated	93%	$3,694	$2,013	$5,708
Jackson Elementary	92%	$4,439	$1,619	$6,058
Roosevelt Elementary	90%	$4,075	$4,766	$8,841
Jefferson Elementary	90%	$4,647	$1,211	$5,858
Altadena Elementary	89%	$4,939	$3,779	$8,718
Cleveland Elementary	89%	$3,761	$3,119	$6,881
Franklin Elementary	88%	$3,549	$1,845	$5,394
Longfellow Elementary	80%	$4,746	$1,351	$6,098
Loma Alta Elementary	74%	$5,265	$3,642	$8,907
San Rafael Elementary	72%	$4,295	$2,818	$7,112
Burbank Elementary	70%	$4,045	$1,759	$5,803
Willard Elementary	66%	$3,909	$2,401	$6,311
Field Elementary	64%	$4,649	$1,805	$6,455
Webster Elementary	64%	$5,143	$1,961	$7,104
McKinley School	57%	$3,566	$1,026	$4,591
Norma Coombs Alternative	53%	$3,677	$741	$4,418
Hamilton Elementary	52%	$3,452	$1,605	$5,057
Don Benito Fundamental	37%	$4,236	$555	$4,791
Sierra Madre Elementary	21%	$4,223	$826	$5,049

Exhibit 2.

Restricted Elementary School Per-Pupil Expenditures by Targeted Student Population Across Schools in 2009-10 (Total Expenditures in Bold)

Legend: Restricted: FRPL, Restricted: SE, Restricted: Low Performing Students, Restricted: ELL, Restricted: All Students

School	FRPL	values	Total
Madison Elementary	93%	$556, $900, $583	$2,330
Washington Accelerated	93%	$1,054, $475, $345	$2,013
Jackson Elementary	92%	$620, $324, $581	$1,619
Roosevelt Elementary	90%	$820, $3,135, $294, $513	$4,766
Jefferson Elementary	90%	$344, $473, $245	$1,211
Altadena Elementary	89%	$1,016, $805, $1,334, $604	$3,779
Cleveland Elementary	89%	$1,482, $810, $366, $435	$3,119
Franklin Elementary	88%	$1,049, $205, $247, $343	$1,845
Longfellow Elementary	80%	$314, $314, $520	$1,351
Loma Alta Elementary	74%	$487, $2,023, $422, $708	$3,642
San Rafael Elementary	72%	$1,140, $981, $491	$2,818
Burbank Elementary	70%	$474, $698, $437	$1,759
Willard Elementary	66%	$556, $550, $347, $869	$2,401
Field Elementary	64%	$508, $535, $332, $426	$1,805
Webster Elementary	64%	$273, $819, $327, $516	$1,961
McKinley School	57%	$426, $270	$1,026
Norma Coombs Alternative	53%	$295, $249	$741
Hamilton Elementary	52%	$663, $230, $577	$1,605
Don Benito Fundamental	37%	$306	$555
Sierra Madre Elementary	21%	$557	$826

Note: Per-pupil expenditures are displayed for those totaling more than $200.

Exhibit 3.   Elementary School Demographics (2009-10)

School	Percent Free and Reduced Price Lunch	Percent English Learners	Percent Special Education	Total Enrollment
Madison Elementary	93%	56%	2%	494
Washington Accelerated	93%	46%	0%	725
Jackson Elementary	92%	34%	0%	373
Roosevelt Elementary	90%	37%	17%	289
Jefferson Elementary	90%	40%	0%	574
Altadena Elementary	89%	22%	6%	306
Cleveland Elementary	89%	35%	0%	320
Franklin Elementary	88%	24%	2%	379
Longfellow Elementary	80%	24%	0%	513
Loma Alta Elementary	74%	15%	11%	241
San Rafael Elementary	72%	27%	3%	343
Burbank Elementary	70%	22%	3%	349
Willard Elementary	66%	26%	3%	620
Field Elementary	64%	21%	2%	388
Webster Elementary	64%	18%	10%	376
McKinley School	57%	18%	1%	1,141
Norma Coombs Alternative	53%	7%	2%	565
Hamilton Elementary	52%	16%	4%	570
Don Benito Fundamental	37%	10%	3%	693
Sierra Madre Elementary	21%	6%	2%	997

Note: Schools are sorted from highest percent free and reduced price lunch to lowest.

- In contrast, Roosevelt Elementary and Altadena Elementary have a dissimilar distribution of per-pupil restricted expenditures. Roosevelt spent $820 per pupil (9 percent of its categorical resources) on impoverished students, whereas Altadena spent $1,016 (13 percent). The largest difference between these two is in expenditures made with funding targeted towards special education students, where Roosevelt spent $3,135 (35 percent) and Altadena only $805 (9 percent). This is probably related to the fact that 17 percent of the students in Roosevelt Elementary received special education services compared to only 6 percent at Altadena.

Selected Middle School Findings

At the middle schooling level there also seems to be no clear relationship between per-pupil expenditures and student poverty.

- Washington Middle, with the highest proportion of students in poverty (25 percent) and designated as English language learners (28 percent), and Wilson Middle with the lowest percent of impoverished and English learner students (14 and 16 percent, respectively), spent almost the same in overall per-pupil expenditures.
- Eliot Middle and Wilson Middle, which had similar levels of students in poverty and designated as English learners, have a difference of $1,000 in their overall per-pupil expenditures.

Looking at categorical per-pupil expenditures, the exhibit shows that regardless of the level of student poverty, the schools had very different levels of restricted expenditures.

- For example, Wilson spent $500 more of categorical resources than Eliot, even though they have similar levels of poverty and of English learners.
- Washington spent the largest amount of per-pupil categorical resources, approximately $600 more than Wilson, the lowest spender of restricted dollars.

Regarding the patterns across different targeted student populations, we observe that Wilson Middle and Eliot Middle had similar resources spent on students eligible for free and reduced price lunch and for the all students categories. However, they differed greatly in the percent of restricted resources spent on low-performing students. Wilson spent $588 on this category, which represents33 percent of the categorical per-pupil expenditures, whereas Eliot spent $300 less, which is about 20 percent of its restricted per-pupil expenditures.

Exhibit 4.

Overall Middle School Per-Pupil Expenditures by Targeted Student Population Across Schools in 2009-10 (Total Expenditures in Bold)
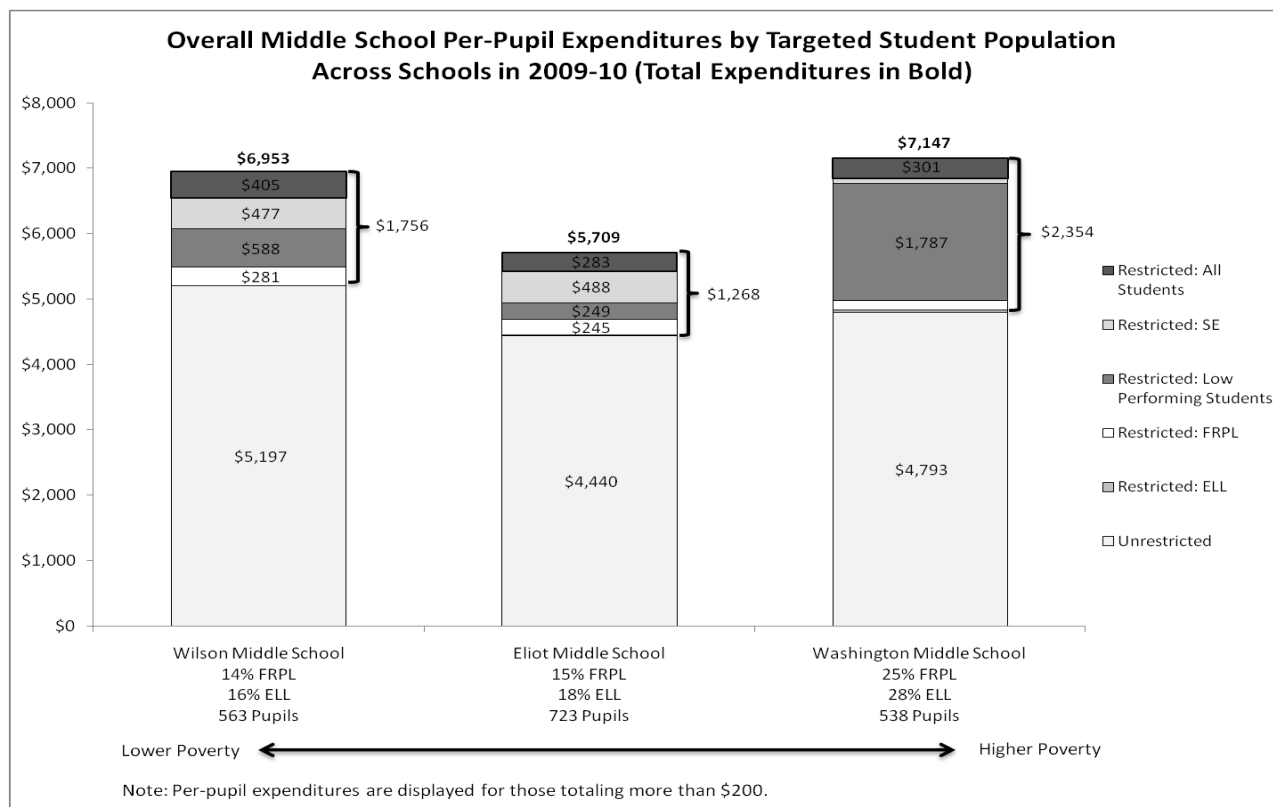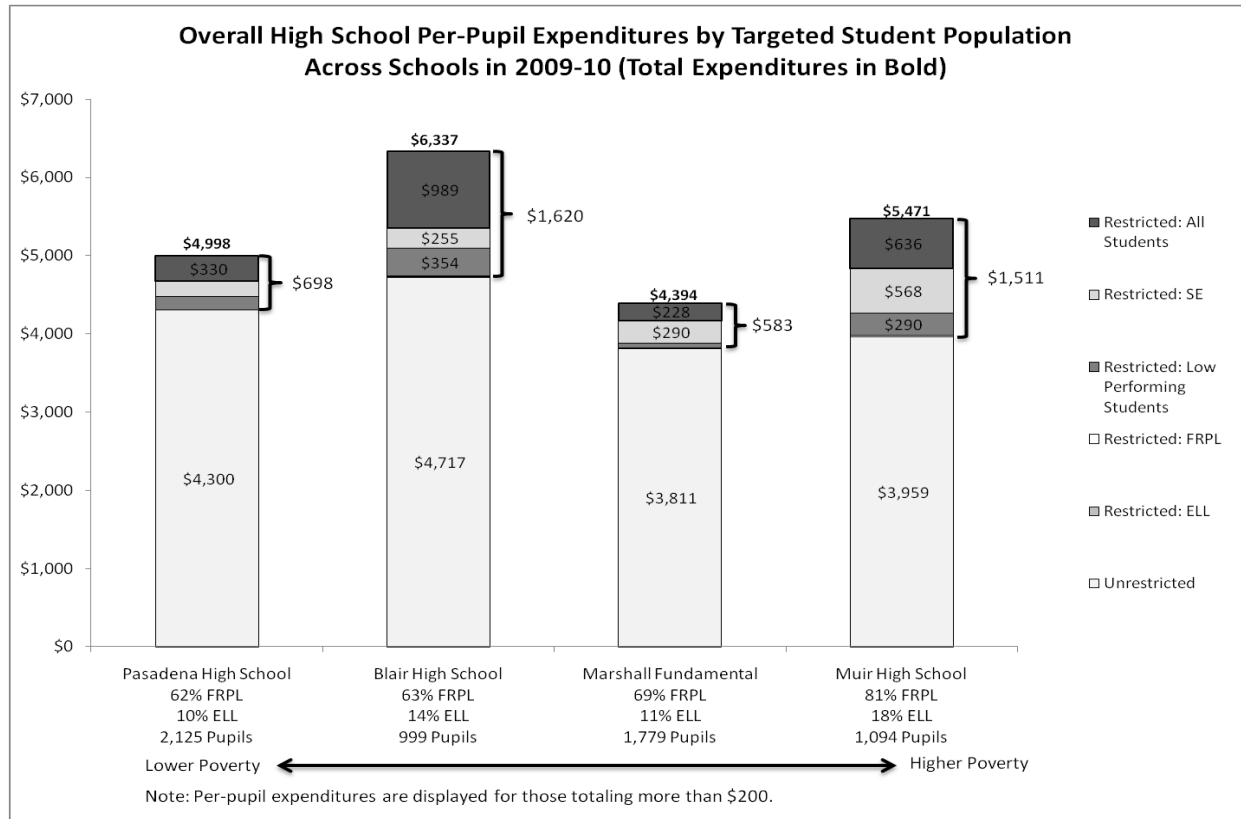
Selected High School Findings

For high schools, there again seems to be no relationship between per-pupil expenditures and student poverty.

- Blair High and Pasadena High had similar proportions of students eligible for free and reduced lunch and designated as English learners (about 62 and 12 percent, respectively), but the overall per-pupil expenditures are quite different. Blair High spent $1,330 more per pupil than Pasadena High. Some of the expenditure difference could be explained by the smaller number of students enrolled at Blair (999) versus Pasadena (2,125), but probably not all of it.
- At the upper part of the poverty spectrum, Muir High had 81 percent of its student body eligible for free and reduced lunch but spent almost $1,000 less per pupil than Blair High (both schools have similar levels of enrollment and of English language learners).

Blair High and Muir High spent similar total categorical per-pupil expenditures, even though their poverty levels differed substantially.

Regarding per-pupil expenditures by targeted student population, Blair High and Pasadena High allocated similar resources to low performing students (about 23 percent), but differed in the percentage allocated to all students. Blair allocated 61 percent of its categorical resources to all students where as Pasadena High dedicated only 40 percent. In absolute terms the difference is also sizeable, Blair High spent almost three times more per-pupil than Pasadena High, $330 versus $989, respectively.

Exhibit 5.

Overall High School Per-Pupil Expenditures by Targeted Student Population Across Schools in 2009-10 (Total Expenditures in Bold)

	Pasadena High School	Blair High School	Marshall Fundamental	Muir High School
Total	**$4,998**	**$6,337**	**$4,394**	**$5,471**
Restricted: All Students	$330	$989	$228	$636
Restricted: SE		$255	$290	$568
Restricted: Low Performing Students		$354		$290
Unrestricted	$4,300	$4,717	$3,811	$3,959
Bracket total	$698	$1,620	$583	$1,511

Legend:
- Restricted: All Students
- Restricted: SE
- Restricted: Low Performing Students
- Restricted: FRPL
- Restricted: ELL
- Unrestricted

Pasadena High School	Blair High School	Marshall Fundamental	Muir High School
62% FRPL	63% FRPL	69% FRPL	81% FRPL
10% ELL	14% ELL	11% ELL	18% ELL
2,125 Pupils	999 Pupils	1,779 Pupils	1,094 Pupils

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Note: Per-pupil expenditures are displayed for those totaling more than $200.

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Per-Pupil Expenditures by Object Categories

The second analysis investigates how per-pupil expenditures by object category relate to student poverty. To do this, expenditures were first grouped into the following five categories using the SACS object code: certificated personnel salaries, classified personnel salaries, employee benefits, books and supplies, and services, capital outlay and other outgoing. Next, for each school we calculated per-pupil expenditures in each category by dividing expenditures by total school enrollment. Finally, schools were sorted by percentage of students eligible for free and reduced price lunch and the expenditures by object were charted allowing the comparison of school-level per-pupil expenditures across student poverty. Similar to the first analysis presented above, this expenditure-by-object analysis was conducted by schooling level (i.e., elementary, middle and high).

Selected Elementary School Findings

At the elementary level, we also observe different patterns of per-pupil expenditures by object across schools, regardless of the level of student poverty.

- Although, Roosevelt Elementary and Altadena Elementary had similar percentages of students eligible for free and reduced price lunch, they differed in their patterns of per-pupil expenditure by object. For example, 43 percent of Roosevelt's per-pupil expenditures were spent on certificated personnel salaries, whereas Altadena spent 13 percentage points more (56 percent) on this category. Regarding classified personnel salaries, the difference between these two elementary schools was about 11 percentage points.
- Jackson Elementary and Hamilton Elementary had similar patterns of per-pupil expenditure by object, even though their incidence of impoverished and English language learner students are at upper and lower extremes, respectively, among the elementary schools in the district. Jackson spent $3,461 on certificated personnel salaries, whereas Hamilton Elementary spent $500 less. This could, in part, be explained by the large difference in enrollment (Hamilton had 570 students while Jackson only served 373). However, it is interesting that in relative terms they both spent about 57 percent of their expenditure in certificated personnel salaries.

As would be expected, the largest expenditure category was certificated personnel salaries, while the smallest ones were books and supplies, and services, capital outlay and other outgoing.

Exhibit 6.   Elementary School Demographics (2009-10)

Overall Elementary School Per-Pupil Expenditures by Object Across Schools in 2009-10 (Total Expenditures in Bold)

Note: Per-pupil expenditures are displayed for those totaling more than $350.
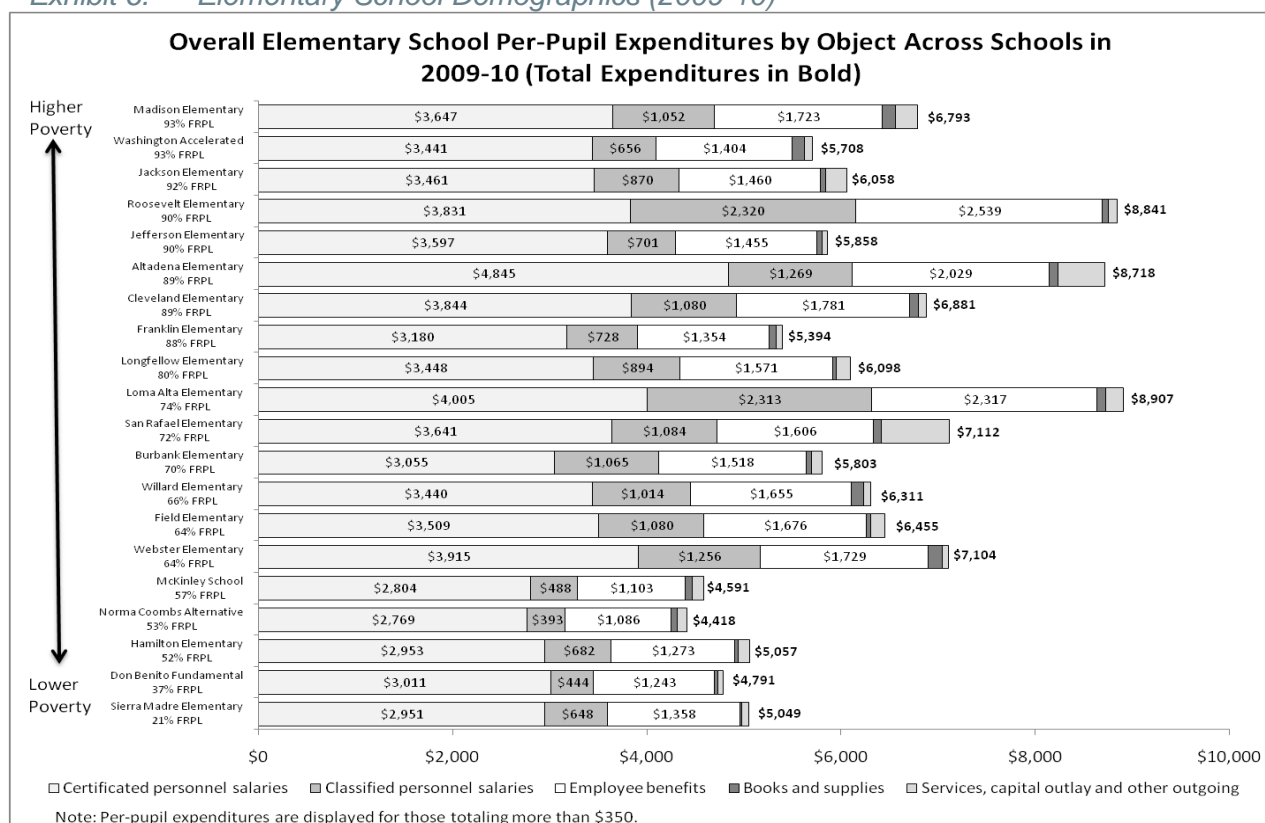
Exhibit 7.   Elementary School Demographics (2009-10)

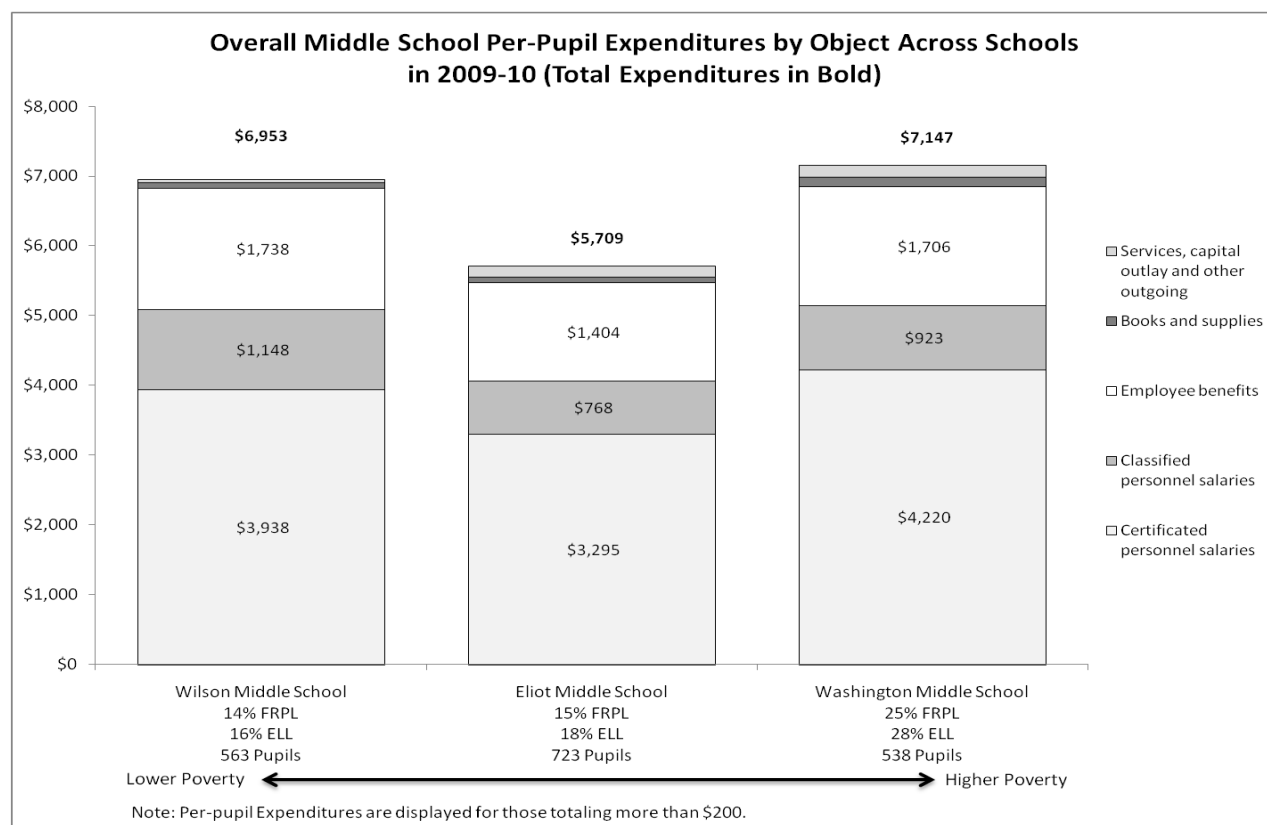| School	Percent Free and Reduced Price Lunch	Percent English Learners	Total Enrollment
Madison Elementary	93%	56%	494
Washington Accelerated	93%	46%	725
Jackson Elementary	92%	34%	373
Roosevelt Elementary	90%	37%	289
Jefferson Elementary	90%	40%	574
Altadena Elementary	89%	22%	306
Cleveland Elementary	89%	35%	320
Franklin Elementary	88%	24%	379
Longfellow Elementary	80%	24%	513
Loma Alta Elementary	74%	15%	241
San Rafael Elementary	72%	27%	343
Burbank Elementary	70%	22%	349
Willard Elementary	66%	26%	620
Field Elementary	64%	21%	388
Webster Elementary	64%	18%	376
McKinley School	57%	18%	1,141
Norma Coombs Alternative	53%	7%	565
Hamilton Elementary	52%	16%	570
Don Benito Fundamental	37%	10%	693
Sierra Madre Elementary	21%	6%	997

Note: Schools are sorted from highest percent free and reduced price lunch to lowest.

Selected Middle School Findings

Looking at middle school per-pupil expenditures by object, there is no clear association between object categories and student poverty.

- In relative terms, the three middle schools have the similar per-pupil expenditure patterns across object categories. They each spent about 58 percent of their overall expenditure on certificated salaries and 25 percent on employee benefits. However, while they differed only slightly on the percentage spent on classified personnel salaries, the variation in absolute terms was substantial. For example, Washington Middle, with 25 percent of students in poverty and 28 percent designated as English language learners, spent $4,220 in certificated personnel, whereas Wilson Middle spent almost $300 less per-pupil. Moreover, Eliot Middle spent almost $700 less per-pupil on certificated personnel salaries than Wilson Middle School. In terms of books and supplies, Wilson spent over $200 per pupil more than Washington and $380 more than Eliot.
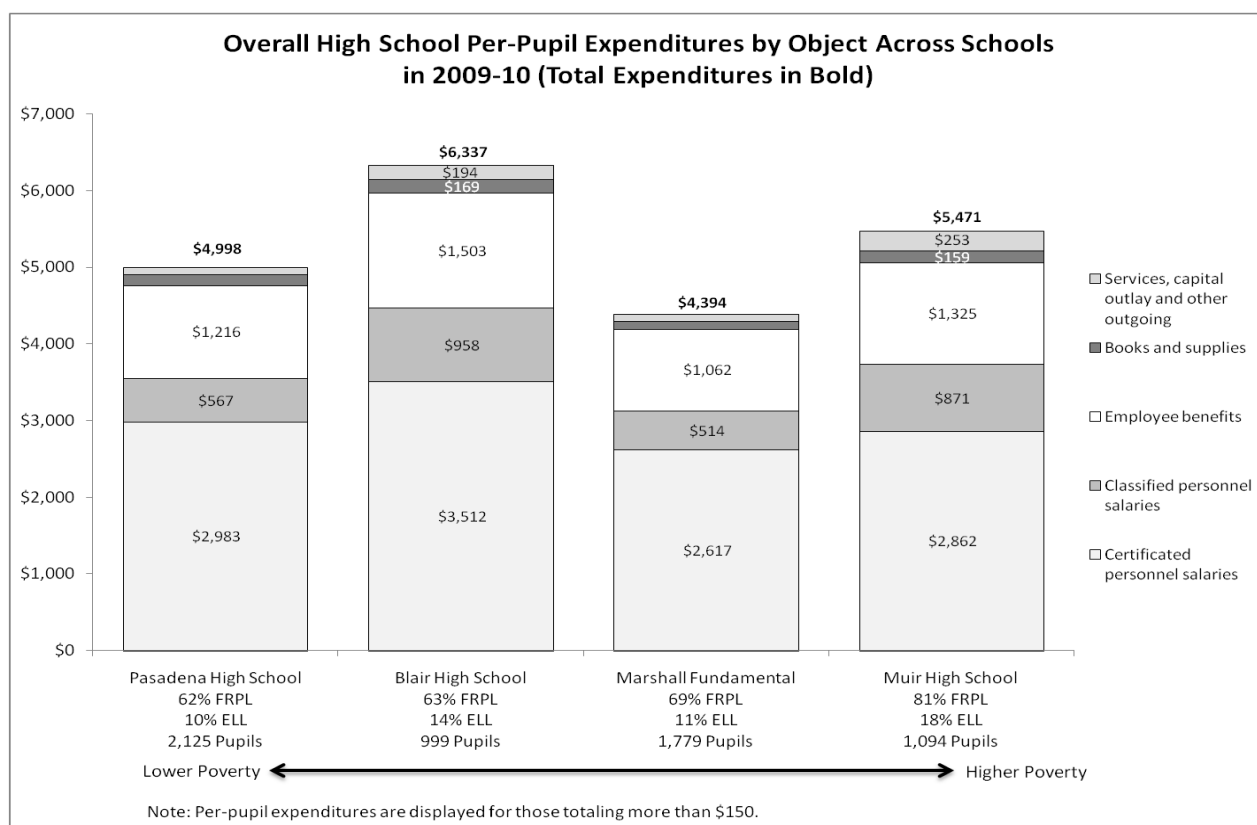
Exhibit 8.

Overall Middle School Per-Pupil Expenditures by Object Across Schools in 2009-10 (Total Expenditures in Bold)

Note: Per-pupil Expenditures are displayed for those totaling more than $200.

Selected High School Findings

As seen in the other schooling levels, high schools also do not exhibit a clear relationship between per-pupil expenditure broken out by object categories and student poverty.

In relative terms, the four high schools have similar levels of expenditure across object categories. They each spent between 52 to 60 percent of their overall expenditure on certificated salaries and 24 percent on employee benefits. However on absolute terms, there were the following differences:

- Though their levels of poverty are comparable, Blair High School spent $529 more on certificated personnel salaries per pupil and $391 more on classified personnel salaries per pupil than Pasadena High School.
- Despite having a poverty rate that was 18 points lower than Muir High School, Blair High School had a per pupil on certificated personnel salaries that was $650 more.

Exhibit 9.

Overall High School Per-Pupil Expenditures by Object Across Schools in 2009-10 (Total Expenditures in Bold)

	Pasadena High School 62% FRPL 10% ELL 2,125 Pupils	Blair High School 63% FRPL 14% ELL 999 Pupils	Marshall Fundamental 69% FRPL 11% ELL 1,779 Pupils	Muir High School 81% FRPL 18% ELL 1,094 Pupils
Total	**$4,998**	**$6,337**	**$4,394**	**$5,471**
Services, capital outlay and other outgoing	$1,216	$1,503	$1,062	$1,325
Books and supplies		$194		$253
Employee benefits		$169		$159
Classified personnel salaries	$567	$958	$514	$871
Certificated personnel salaries	$2,983	$3,512	$2,617	$2,862

Lower Poverty ← → Higher Poverty

Note: Per-pupil expenditures are displayed for those totaling more than $150.

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Per-Pupil Expenditures by Function Categories

The final analysis investigates the distribution of per-pupil expenditures across four function categories: instruction, administration, pupil support services, and miscellaneous. To do this, the expenditures were first mapped according to the SACS codes corresponding to each of the four categories listed above. Next, expenditures per-pupil across the categories were calculated by dividing the category-specific expenditures for each school by total enrollment. Finally, schools were sorted by percentage of students eligible for free and reduced price lunch and the expenditures by function were charted allowing the comparison of school-level per-pupil expenditures across student poverty. Similar to the first analysis presented above, this expenditure-by-object analysis was conducted by schooling level (i.e., elementary, middle and high).

Selected Elementary School Results

Consistent with the previous analysis, at the elementary level we found no clear association between expenditures, in this case broken out by function categories category, and student poverty.

- Roosevelt Elementary and Altadena Elementary, with similar levels of impoverished students and enrollment had similar expenditures per pupil on instruction; however, Roosevelt spent $186 more per pupil on administration.
- Though the percent of students eligible for free and reduced price lunch at Jackson Elementary and Hamilton Elementary differed by 40 percentage points, the two schools spent about the same in terms of instruction per pupil.
- On a per-pupil basis, Loma Alta Elementary spent $236 more on instruction and $372 more on administration per pupil than did Roosevelt Elementary. However, the percentage of free and reduced price lunch eligible students at Loma Alta was 24 percentage points lower than that at Roosevelt.
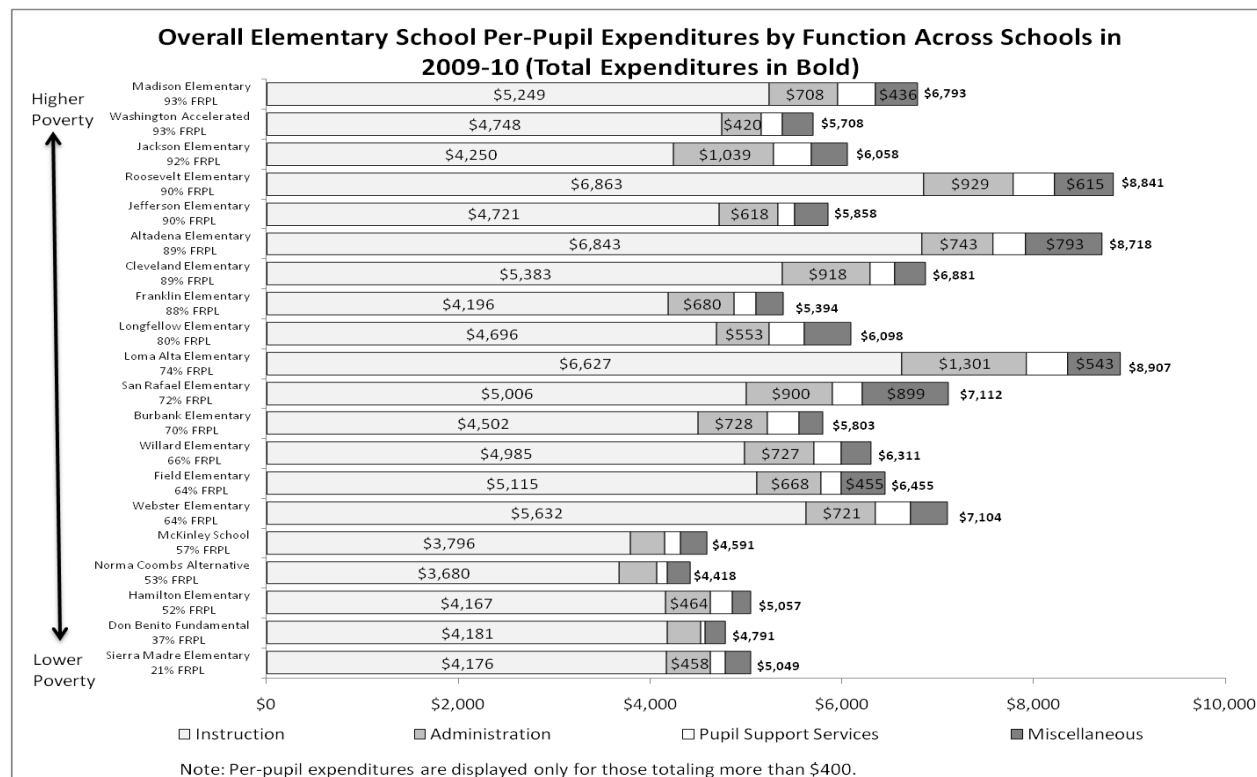
Exhibit 10.

Overall Elementary School Per-Pupil Expenditures by Function Across Schools in 2009-10 (Total Expenditures in Bold)

Note: Per-pupil expenditures are displayed only for those totaling more than $400.

Exhibit 11.   Elementary School Demographics (2009-10)

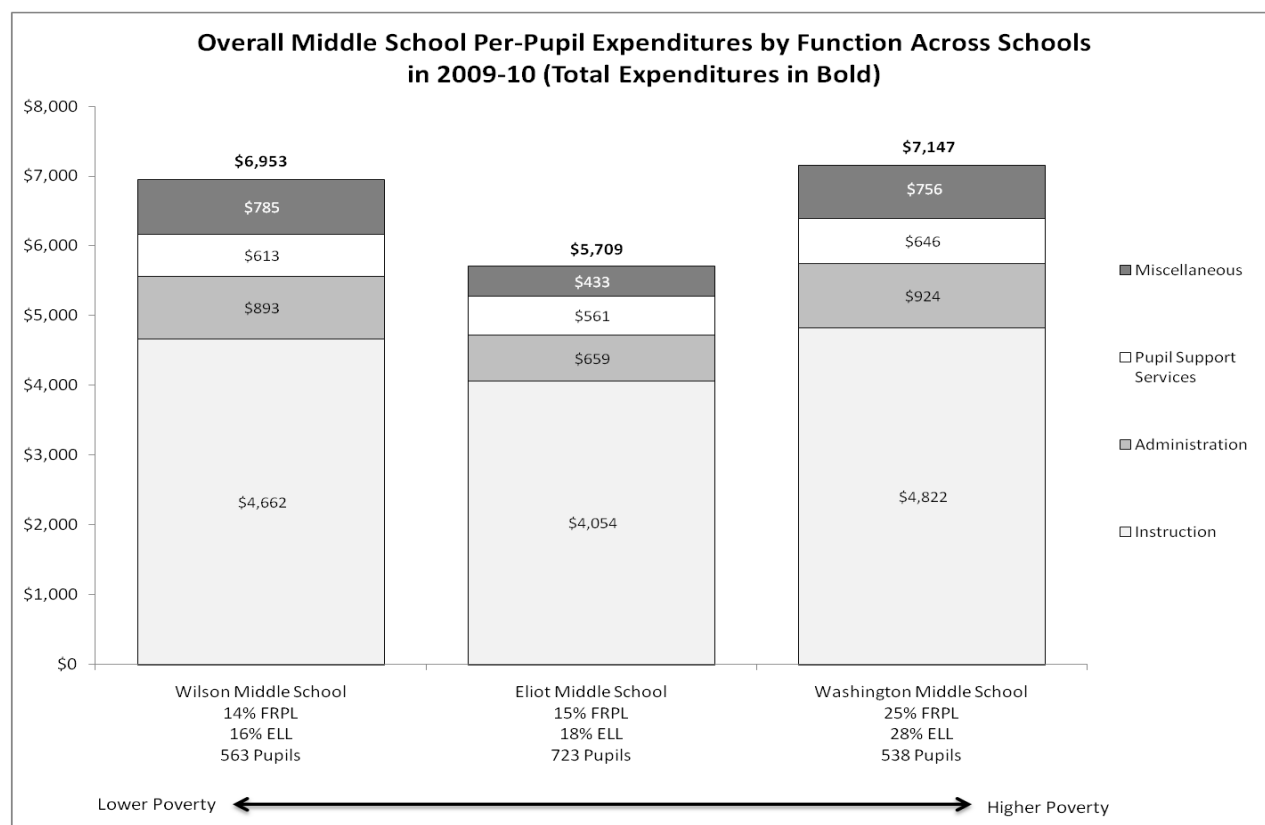| School	Percent Free and Reduced Price Lunch	Percent English Learners	Total Enrollment
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Norma Coombs Alternative	53%	7%	565
Hamilton Elementary	52%	16%	570
Don Benito Fundamental	37%	10%	693
Sierra Madre Elementary	21%	6%	997

Note: Schools are sorted from highest percent free and reduced price lunch to lowest.

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Selected Middle School Results

Looking at middle school per-pupil expenditures by function, there is no clear association between object categories and student poverty.

- Wilson Middle School and Eliot Middle School had similar rates of eligible for free and reduced price lunch and English learners, but Eliot Middle School spent $608 less per pupil on instruction.
- Though there was an 11-percentage point difference in the student poverty rate, Washington Middle School and Wilson Middle School spent a comparable amount per pupil in all four function categories.

Exhibit 12.

Overall Middle School Per-Pupil Expenditures by Function Across Schools in 2009-10 (Total Expenditures in Bold)

	Wilson Middle School 14% FRPL 16% ELL 563 Pupils	Eliot Middle School 15% FRPL 18% ELL 723 Pupils	Washington Middle School 25% FRPL 28% ELL 538 Pupils
Total	$6,953	$5,709	$7,147
Miscellaneous	$785	$433	$756
Pupil Support Services	$613	$561	$646
Administration	$893	$659	$924
Instruction	$4,662	$4,054	$4,822

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Selected High School Results

For high schools, there again seems to be no relationship between per-pupil expenditures and student poverty.

- Blair High School spent $460 more per pupil on instruction and $522 more on administration than Pasadena High School despite their having similar students poverty rates.
- Though Muir High School had a poverty rate that was 18 percentage points higher than Blair High School, Blair spent $448 more per pupil on instruction and $287 more per pupil on administration.

Exhibit 13.

Overall High School Per-Pupil Expenditures by Function Across Schools in 2009-10 (Total Expenditures in Bold)
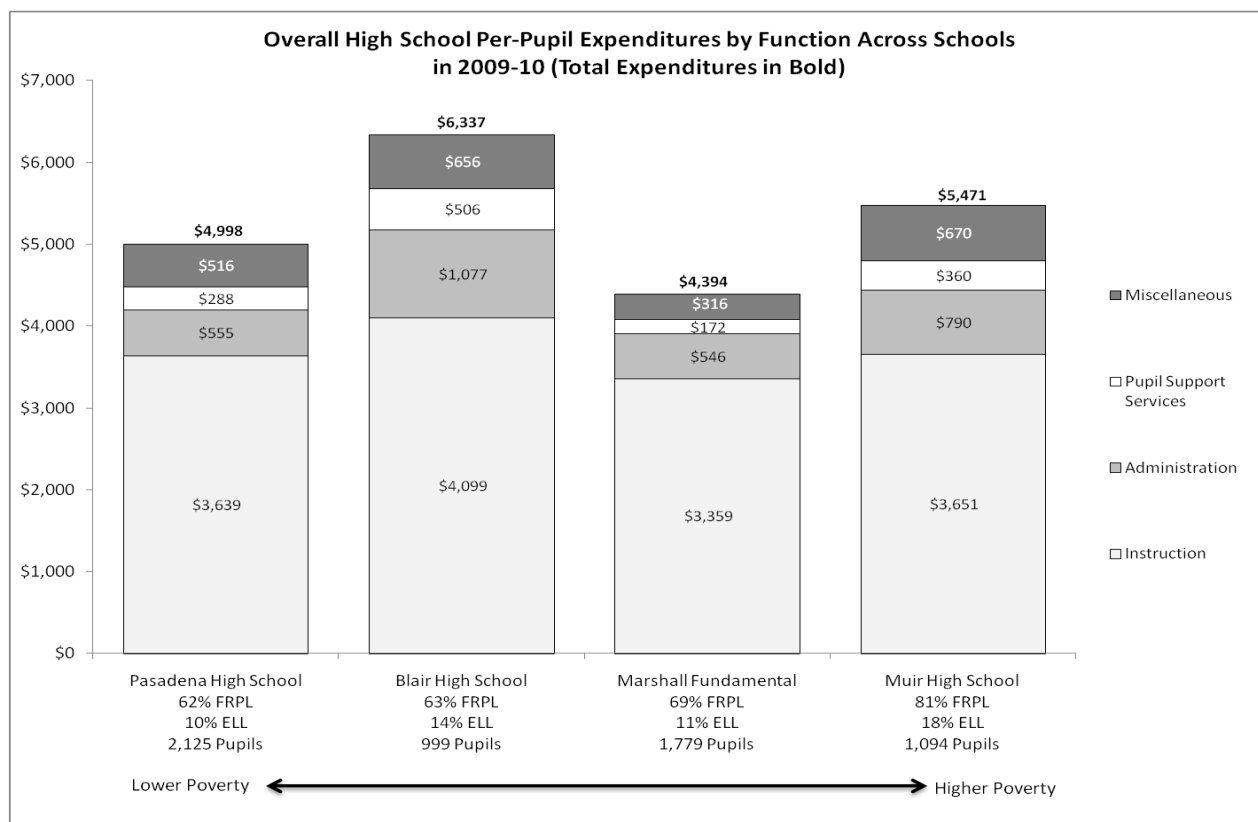
Conclusions

Using the fiscal data provided by the finance office of Pasadena Unified School District and the demographic data obtained from the California Basic Education System maintained by the California Department of Education (CDE), we have presented analyses that investigate whether there is a relationship between student need and per-pupil expenditures.

The main finding of this analysis brief is that there is no straightforward relationship between the proportions of students eligible for free and reduced price lunch and per-pupil expenditures. We examined this relationship in three different ways for all schooling levels. In our first analysis, expenditures by targeted student population we did not observe a clear pattern between per-pupil expenditures and student poverty. For example, at the elementary level, schools with similar poverty levels (around 90 percent), have a range of overall per-pupil expenditures of $5,708 to $8,841. And some schools with dissimilar poverty ranges (from 52 percent to 92 percent) had comparable categorical per-pupil expenditures.

The second analysis investigated the relationship between per-pupil expenditures by object and student poverty. As before, we were unable to establish a direct relationship between expenditures and students eligible for free and reduced free lunch. For example, middle schools with similar levels of student poverty, about 14 percent, had a difference in certificated personnel salaries of almost a $700 per-pupil.

Finally, the third analysis demonstrated that there was also no apparent association between per-pupil expenditures and poverty levels. For instance, looking at the patterns of expenditures by function at the high school level, we observed that Muir High, the school with the highest proportion of students in poverty (81 percent) spent about $500 less per pupil on instruction and $300 per pupil less on administration than Blair High, which had a 63 percent poverty rate.

These analyses present some evidence that there does not seem to be a systematic relationship of expenditures per-pupil and student need as measured by students eligible for free and reduced price lunch.

About the Authors

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Acknowledgments

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For further information about the SSFR project, please visit the project website:

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