

A TALE OF TWO DISTRICTS

**A Comparative Study of Student-Based
Funding and School-Based Decision
Making in San Francisco and Oakland
Unified School Districts**

REPORT APPENDICES

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Appendix A: Data Sources

Demographics and Enrollment Information

A database of public elementary, middle, and high schools in the Oakland Unified School District and the San Francisco Unified School District was compiled using publicly accessible data sources from the California Department of Education. The following publicly available data sources, with locations listed in Exhibit A1, were used to construct the database of school-level demographic information used in the analyses of resource trends and expenditure patterns:

- Public School Directory (PUBSCHLS): A master directory of basic information on schools and districts that have ever been assigned County-District-School (CDS) codes.
- School Information Form (SIF): A key data component of the California Basic Educational Data System (CBEDS) that provides school enrollment and demographics counts as well as information on classified staff. In particular, the SIF Section A, D and E and SIF Section B files provide data on grade-level student enrollments, disaggregated by ethnicity and gender.
- California Work Opportunity (CalWORKS): The Free and Reduced Price Meals Program (FRPM) and Aid to Families with Dependent Children (AFDC) databases provide school-level counts and percentages of students eligible for free or reduced-price meals.
- Professional Assignment Information Form (PAIF): Staffing files from the CBEDS contain detailed record- and assignment-level information on certified staff.

Exhibit A1: Locations of Data Sources Used in Quantitative Analysis

Data File Name	Available for Download at:
PUBSCHLS	http://www.cde.ca.gov/ds/si/ds/pubschls.asp
SIFADE (ff)	http://www.cde.ca.gov/ds/sd/cb/filesifae.asp
SIFB (ffss)	http://dq.cde.ca.gov/DataQuest/downloads/sifenr.asp
FRPM/AFDC (ffss)	http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp
ASGNCODE ASSIGN(ff) PAIF(ff)	http://www.cde.ca.gov/ds/ss/cb/filespaif.asp

Note: ff = Fall of school year. ss = Spring of school year.

In order to analyze data from these multiple sources, the databases were merged by the unique 14-digit CDS code and by year.

For the purposes of our analyses, the sample was limited to traditional (i.e., non-charter and non-alternative) elementary, middle, and high schools in the Oakland and San Francisco Unified School Districts. Schools in the Oakland and San Francisco Unified School Districts identified in the Public School Directory database as being of the following school types were excluded from our sample: adult education centers, alternative schools of choice, community college campuses, charter schools, continuation high, county community, district community day, K-12, and opportunity and special education schools. Exhibit A2 shows the count of public elementary, middle, and high schools from 1999-2000 through 2006-07 with available CBEDS SIF enrollment data.¹

¹ Across the study years, the total number of students enrolled in the schools dropped from our sample ranged from 2,429 to 8,603 for Oakland 1,847 to 3,918 for San Francisco.

Exhibit A2: Counts of Oakland Schools with Enrollment Data

Oakland								
	1999	2000	2001	2002	2003	2004	2005	2006
Elementary	61	63	65	67	69	65	70	70
Middle	18	19	20	20	20	21	21	26
High	6	6	7	11	18	24	27	31
Total	85	88	92	98	107	110	118	127

San Francisco								
	1999	2000	2001	2002	2003	2004	2005	2006
Elementary	78	78	76	77	77	76	74	72
Middle	17	17	17	17	20	20	19	17
High	17	17	17	17	18	20	21	20
Total	112	112	110	111	115	116	114	109

As mentioned above, the measure of poverty used is the percent of students eligible for free or reduced-price meals was extracted from the CalWORKS database. Merging the initial sample of schools with available enrollment together with the CalWORKS database resulted in a small number of observations that could not be matched. In addition, there were limited instances where schools had missing or inaccurately identified (as 0 percent) percent of students eligible for free or reduced-price lunch. Missing or inaccurate data were imputed using the arithmetic mean of school-specific data from adjacent years. For instance, if a school was missing or had inaccurately identified the percent of students eligible for free or reduced-price lunch in 2002-03, this value was imputed using the average rates from the 2001-02 and 2003-04 school years. There were six cases where the percent eligible for free or reduced-price lunch had to be imputed (four in Oakland and two in San Francisco).

Classification of Low-, Middle-, and High-Poverty Schools by School Type

In much of the analysis that follows, the use of resources is contrasted across groups of schools categorized by poverty level. Categories of low, middle, and high poverty were calculated within district, schooling level (elementary, middle, or high), and year. For each sample year, a school was identified as low (high) poverty if the percent of students eligible for free or reduced-price meals at the school was less than or equal (greater than or equal) to the 25th (75th) pupil-weighted percentile of the percent of students eligible for free or reduced-price meals across schools within the same school type. For example, an elementary school was identified as a high-poverty school in 2006 if its percent of students eligible for free or reduced-price meals was greater than or equal to the 75th percentile of the percent of students eligible for free or reduced-price meals across all elementary schools in the district for that year. As the percent of students eligible for free or reduced price lunch at each school represents a wide range of enrollment levels, it was necessary to weight the percentile cutoff values by pupils when determining the poverty category of each school.

Exhibit A3 includes the count of public non-charter elementary, middle, and high schools by their designated poverty category.

Exhibit A3: Counts of Traditional Schools by Poverty Categories included in the Demographics Database

Oakland								
	1999	2000	2001	2002	2003	2004	2005	2006
Elementary	57	58	60	61	62	58	60	60
Low Poverty	20	20	19	22	21	18	16	16
Middle Poverty	26	27	29	24	27	26	31	30
High Poverty	11	11	12	15	14	14	13	14
Middle	15	15	17	17	17	18	18	21
Low Poverty	4	4	5	4	4	4	4	3
Middle Poverty	6	5	7	7	7	9	10	9
High Poverty	5	6	5	6	6	5	4	9
High	6	6	7	8	14	16	16	17
Low Poverty	2	2	3	3	3	3	2	4
Middle Poverty	2	2	2	2	4	6	9	9
High Poverty	2	2	2	3	7	7	5	4

San Francisco								
	1999	2000	2001	2002	2003	2004	2005	2006
Elementary	76	76	75	75	75	75	73	71
Low Poverty	16	15	16	15	15	13	13	14
Middle Poverty	37	38	38	38	39	39	40	34
High Poverty	23	23	21	22	21	23	20	23
Middle	17	17	17	17	18	18	17	15
Low Poverty	3	3	3	3	3	3	3	3
Middle Poverty	8	8	7	8	9	9	8	8
High Poverty	6	6	7	6	6	6	6	4
High	14	14	14	13	14	14	14	14
Low Poverty	3	3	3	3	3	4	3	3
Middle Poverty	5	5	5	4	5	4	7	7
High Poverty	6	6	6	6	6	6	4	4

Classified and Certified Staff Information

School Information Form (SIF) Section A, D, and E

The SIF Section A, D, and E files provide data on classified staff counts, disaggregated by ethnicity and gender. The classified staff counts in the SIF A, D, and E files are categorized by type and by status. Classified staff types are as follows: 1) paraprofessionals, including teaching assistants, teacher aides, pupil services aides, and library aides; 2) clerical, including school secretaries; and, 3) other including non-certified staff such as custodians, bus drivers, and cafeteria workers. For the purposes

of our analyses, the disaggregated SIF data were collapsed into a database with observations by CDS code and by year.

Professional Assignment Information Form (PAIF)

The Professional Assignment Information Form (PAIF) data files provide detailed staff information, disaggregated by staffing records and assignments for teachers, administrators, and pupil service staff. The course file contains course data by assignment code for each staff record.

The staff characteristics file includes the following characteristics for each staff member: ethnicity, years of educational and district experience, and authorization status. The assignment code file contains the assignment code and assignment code names listed in the Administrative Manual for CBEDS Coordinators and School Principals. The assignment code and name from the assignment code file identifies the course or assignment assigned to the certified staff.

The staff characteristics data files were merged with their corresponding course data files by record identification and CDS code for the following school years: 1999-00, 2000-01, 2001-02, 2002-03, 2003-2004, 2004-2005, 2005-2006, and 2006-07. The assignment code data file was merged with the staff characteristics and course database by the assignment code variable available in the course data file.

The PUBSCHLS, CalWORKS, and SIF data mentioned above that were compiled into a school- and year-specific demographics database were merged with the databases of classified and certified staff information. Records with demographics data were included in the final database. All schools observed in the demographics database were matched with classified and certified staff information. Refer to Exhibit A3 for the count of schools included in the analyses of resource patterns.

Expenditure Data

The quantitative analyses involving schooling expenditures make use of school-level information from the California Standardized Account Code Structure (SACS) fiscal data. Under California's education code, all local education agencies (LEAs) are required to follow a chart of accounts called Standardized Account Code Structure (SACS) when reporting their financial activities to the CDE.² SACS classifies expenditure revenues, expenditures, assets, liabilities, and fund balances through using the following seven identifiers:

- *Fund* – Identifies the funding source from which expenditures are paid out or in which revenues are received. Examples include: General Fund, Child Development Fund, and Cafeteria Special Revenue Fund.
- *Resource* – Used to track activities that are funded with revenues with special accounting or reporting requirements or that are legally restricted. Examples include: Unrestricted, Bilingual Education, Educational Technology, and Other Restricted Federal.
- *Goal* – Used to identify costs by instructional goals and objectives of an LEA. Goal groups costs by population, setting, and/or educational mode. Examples include: include regular education K–12, continuation schools, and migrant education.
- *Function* – Identifies activities or services performed to support or accomplish one or more goals. Examples include instruction, school administration, and pupil transportation.

² An in-depth description of SACS is available in the California School Accounting Manual (CSAM), which is publicly available for download at <http://www.cde.ca.gov/fg/ac/sa/documents/csam2008updateonly.pdf>.

- *Object* – Used to classify revenues by source/type (e.g., revenue limit sources, federal revenue, other state revenue, and contracts) and expenditures by type of commodity or service (e.g., certificated salaries, classified salaries, employee benefits, books/supplies).
- *School* – Identifies a specific, physical school structure or group of structures that form a campus under a principal’s direct responsibility.
- *Year* - Identifies the reporting year for a project that has more than one reporting year during the LEA’s fiscal year.

As mentioned above, the quantitative analysis concerning expenditures employs school-level data in order to be able to identify levels of spending by school level (elementary, middle, and high), need (i.e., student poverty) and size. While districts must necessarily collect expenditure data at the school level and the *School* identifier is required to be built into their accounting systems, districts are not currently required to report this fiscal data at the school building level and there are currently relatively few that do. To this end, the study research team obtained several years of SACS data (2002-03 to 2006-07 for Oakland) and (2000-01 to 2006-07 for San Francisco) directly from the central district offices. These data include expenditures not only for schools, but also those incurred at the central district office itself.

In order to isolate the expenditures from the fiscal files, only line items identified by Fund = 1 (Government Funds) and Object = 1000 to 7999 (Expenditures) were preserved. The extracted expenditure data were validated by first aggregating (summing) the school-level expenditure line items within the object-specific categories listed in Exhibit A4 to the district level:

Exhibit A4: Definitions of Major Expenditure Data Object Categories

- 1. Certified Personnel Salaries (Object = 1000 to 1999)** – Includes Salaries for Certified Supervisors, Administrators, Pupil Support Staff, and Teachers
 - 2. Classified Personnel Salaries (Object = 2000 to 2999)** – Includes Salaries for Classified Supervisors, Administrators, and Support and Clerical Staff
 - 3. Employee Benefits (Object = 3000 to 3999)** – Includes Benefits for Retirement, Health, Unemployment, and Other Benefits
 - 4. Books and Supplies (Object = 4000 to 4999)** – Includes Expenditures for Curricula and Materials, Equipment, and Food
 - 5. Services and Other Operating Expenditures (Object = 5000 to 5999)** – Includes Expenditure for Memberships and Non-Capitalized Improvements and Communications
-

The following is a comprehensive list of all object codes:

1000–1999 Certificated Personnel Salaries

- 1100 Certificated Teachers' Salaries
- 1200 Certificated Pupil Support Salaries
- 1300 Certificated Supervisors' and Administrators' Salaries
- 1900 Other Certificated Salaries

2000–2999 Classified Personnel Salaries

- 2100 Classified Instructional Salaries
- 2200 Classified Support Salaries
- 2300 Classified Supervisors' and Administrators' Salaries
- 2400 Clerical, Technical, and Office Staff Salaries
- 2900 Other Classified Salaries

3000–3999 Employee Benefits

- 3101 State Teachers' Retirement System, certificated positions
- 3102 State Teachers' Retirement System, classified positions
- 3201 Public Employees' Retirement System, certificated positions
- 3202 Public Employees' Retirement System, classified positions
- 3301 OASDI/Medicare/Alternative, certificated positions
- 3302 OASDI/Medicare/Alternative, classified positions
- 3401 Health and Welfare Benefits, certificated positions
- 3402 Health and Welfare Benefits, classified positions
- 3501 State Unemployment Insurance, certificated positions
- 3502 State Unemployment Insurance, classified positions
- 3601 Workers' Compensation Insurance, certificated positions
- 3602 Workers' Compensation Insurance, classified positions
- 3701 OPEB, Allocated, certificated positions
- 3702 OPEB, Allocated, classified positions
- 3751 OPEB, Active Employees, certificated positions
- 3752 OPEB, Active Employees, classified positions
- 3801 PERS Reduction, certificated positions
- 3802 PERS Reduction, classified positions
- 3901 Other Benefits, certificated positions
- 3902 Other Benefits, classified positions

4000–4999 Books and Supplies

- 4100 Approved Textbooks and Core Curricula Materials
- 4200 Books and Other Reference Materials
- 4300 Materials and Supplies
- 4400 Noncapitalized Equipment
- 4700 Food

5000–5999 Services and Other Operating Expenditures

- 5100 Subagreements for Services
- 5200 Travel and Conferences
- 5300 Dues and Memberships
- 5400 Insurance
- 5440 Pupil Insurance
- 5450 Other Insurance
- 5500 Operations and Housekeeping Services
- 5600 Rentals, Leases, Repairs, and Noncapitalized Improvements
- 5700–5799 Transfers of Direct Costs
- 5710 Transfers of Direct Costs
- 5750 Transfers of Direct Costs—Interfund
- 5800 Professional/Consulting Services and Operating Expenditures
- 5900 Communications

6000–6999 Capital Outlay

- 6100 Land
- 6170 Land Improvements
- 6200 Buildings and Improvements of Buildings
- 6300 Books and Media for New School Libraries or Major Expansion of School Libraries
- 6400 Equipment
- 6500 Equipment Replacement

6900 Depreciation Expense (for proprietary and fiduciary funds only)

7000–7499 Other Outgo

- 7100–7199 Tuition
- 7110 Tuition for Instruction Under Interdistrict Attendance Agreements
- 7130 State Special Schools
- 7141 Other Tuition, Excess Costs, and/or Deficit Payments to Districts or Charter Schools
- 7142 Other Tuition, Excess Costs, and/or Deficit Payments to County Offices
- 7143 Other Tuition, Excess Costs, and/or Deficit Payments to JPAs
- 7200–7299 Interagency Transfers Out
- 7211 Transfers of Pass-Through Revenues to Districts or Charter Schools
- 7212 Transfers of Pass-Through Revenues to County Offices
- 7213 Transfers of Pass-Through Revenues to JPAs
- 7221 Transfers of Apportionments to Districts or Charter Schools
- 7222 Transfers of Apportionments to County Offices
- 7223 Transfers of Apportionments to JPAs
- 7280 Transfers to Charter Schools in Lieu of Property Taxes (Obsolete as of 2007-08)
- 7281 All Other Transfers to Districts or Charter Schools
- 7282 All Other Transfers to County Offices
- 7283 All Other Transfers to JPAs
- 7299 All Other Transfers Out to All Others
- 7300–7399 Transfers of Indirect Costs (Effective 2008-09)
- 7310 Transfers of Indirect Costs
- 7350 Transfers of Indirect Costs—Interfund
- 7370 Transfers of Direct Support Costs (Valid through 2007-08)
- 7380 Transfers of Direct Support Costs—Interfund (Valid through 2007-08)
- 7430–7439 Debt Service
- 7432 State School Building Repayments
- 7433 Bond Redemptions
- 7434 Bond Interest and Other Service Charges
- 7435 Repayment of State School Building Fund Aid—Proceeds from Bonds
- 7436 Payments to Original District for Acquisition of Property
- 7438 Debt Service—Interest
- 7439 Other Debt Service—Principal

7600–7699 Other Financing Uses

- 7600–7629 Interfund Transfers Out
- 7611 From General Fund to Child Development Fund
- 7612 Between General Fund and Special Reserve Fund
- 7613 State School Building Fund/County School Facilities Fund from All Other Funds of the District
- 7614 From Bond Interest and Redemption Fund to General Fund
- 7615 From General, Special Reserve, and Building Funds to Deferred Maintenance Fund
- 7616 From General Fund to Cafeteria Fund
- 7619 Other Authorized Interfund Transfers Out
- 7630–7699 All Other Financing Uses
- 7651 Transfers of Funds from Lapsed/Reorganized LEAs
- 7699 All Other Financing Uses

The aggregated district-level expenditure data were compared to similar publicly available figures from the EdData website (<http://www.ed-data.k12.ca.us>). The research team was able to perfectly

validate all of the information obtained from the district central offices except for the Oakland data for fiscal years 2003-04 and 2004-05.³

The validated data were then matched to the demographics database described above (see Demographic Data Used in Quantitative Analysis, above). Exhibit A5 and A6 contain the counts of schools by year, schooling level, and poverty category that were found in both data sources.⁴

Exhibit A5: Counts of Oakland Schools With Enrollment, Demographic and Expenditure Data

		Oakland				
		Year				
	Poverty Category	2002-03	2003-04	2004-05	2005-06	2006-07
Elementary	Low	21	-	17	14	15
	Middle	22	-	24	30	29
	High	12	-	11	10	14
	Total	55	-	52	54	58
Middle	Low	4	-	4	4	3
	Middle	7	-	9	10	9
	High	6	-	5	4	9
	Total	17	-	18	18	21
High	Low	3	-	3	2	4
	Middle	1	-	5	9	9
	High	2	-	7	5	4
	Total	6	-	15	16	17

³ We were able to validate all of the Object-specific categories in fiscal year 2003-04 except for Employee Benefits, where our aggregated expenditure was approximately \$98 per pupil larger than that contained in the EdData database. The case of the 2004-05 Oakland data was just the opposite, where the compiled per-pupil expenditure across all of the Object-specific categories was far smaller than the official figures. We worked in earnest with the district to resolve these discrepancies, but were unable to perfectly validate these data. While the 2004-05 figures could be used without seriously biasing our results, we decided that the 2003-04 could not be used in our analysis.

⁴ The San Francisco enrollment/demographics were also merged with data obtained directly from the central district office containing school-level counts of special education students.

Exhibit A6: Counts of San Francisco Schools With Enrollment, Demographic and Expenditure Data

		San Francisco						
		Year						
	Poverty Category	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Elementary	Low	15	15	14	14	13	12	14
	Middle	35	36	36	37	35	39	34
	High	20	19	20	19	22	19	23
	Total	70	70	70	70	70	70	71
Middle	Low	3	3	3	3	3	3	3
	Middle	6	5	5	6	7	6	7
	High	4	5	5	5	4	5	4
	Total	13	13	13	14	14	14	14
High	Low	3	3	3	3	4	3	3
	Middle	4	3	4	5	4	6	6
	High	5	6	5	5	5	4	4
	Total	12	12	12	13	13	13	13

Appendix B: Methodology

Pupil-Weighted Resource Averages

Averages are calculated as pupil-weighted means (i.e., weighted by school enrollment). Weighting the average school resource usage by enrollment was necessary to provide a more representative picture of district-wide resource allocation. Taking straight averages might distort the calculated average by giving equal weight to schools serving larger and smaller student populations.

Teacher Experience Methodology

Years of professional experience for certified staff were taken from the PAIF staff files. A variable indicating the total years of public and private educational service in the current school district and elsewhere was used to calculate the average years of educational experience for certified staff by school level and year. A pupil-weighted average number of years of educational experience was calculated by each school-level and demographic group combination for the following three certified staff types: administrators, pupil and instructional support, and teachers.

Staff type was defined by the following indicators:⁵

- Teacher – An employee of the school district who holds a position requiring certification and whose duties require direct instruction to the pupils in the school(s) of that district.
- Administrator – An employee of the district in a position requiring certification but who is not required to provide direct instruction to pupils or direct services to pupils.
- Pupil and Instructional Support – An employee of the district in a position requiring a standard designated services credential, health, development credential, or a librarian credential and who performs direct services to pupils.

Full-Time-Equivalents (FTE) Methodology

Classified Staff: Classified staff data from the SIF A, D, and E files and the student enrollment data from the SIF B file were used to calculate school- and year-specific FTEs per 100 students. A pupil-weighted average FTE-per-100-students was calculated for the following three classified staff types: paraprofessional, clerical, and other.

The SIF files only provide total counts of part-time and full-time classified staff. Therefore, we approximated that part-time is equivalent to 0.5 FTE and full-time is equivalent to 1.0 FTE in order to convert classified staff counts into FTE units.

The total FTE-per-100-students for each school by year was calculated as follows:

$$\text{Classified Staff FTE per 100 Pupils} = \frac{\left(\text{Fulltime Count} + \frac{\text{Parttime Count}}{2} \right)}{\text{Total Enrollment}} \times 100$$

⁵ Definitions taken from online documentation found at <http://www.cde.ca.gov/ds/ss/cb/fspaif06.asp>.

Certified Staff Methodology

Certified staff data from the PAIF files and the student enrollment data from the SIF B file were used to calculate school- and year-specific FTE-per-100-students by administrative, pupil service and teaching staff types. Unlike the data for classified staff, the PAIF provides actual FTEs rather than counts of full- and part-time staff. A pupil-weighted average FTE-per-100-students for each of these staff types was then calculated for each school-level and demographic group combination.

Distinguishing Expenditures at the District- Versus School-Levels

Exhibits 14 and 15 show the split in expenditure thought to be under the discretion of the central district office versus schools in San Francisco and Oakland, respectively. To perform the analysis, the Standard Account Code Structure fiscal files obtained from the two districts were used to perform the following steps:

- 1) For each year, operational expenditures (total expenditures minus Capital Outlay, Other Financing Uses or Other Outgoing Expenditures) were tracked by site code to schools in our sample versus the central office (the latter defined from the fiscal files as SITE>900).
- 2) Next, each of these year-specific aggregated expenditures for sample schools and the central district office was divided by the total enrollment for our sample schools and total district enrollment, respectively, to provide school and district per-pupil expenditures. These are termed per-pupil expenditure under school discretion (*PPEXP*) and per-pupil expenditure under district discretion, respectively.
- 3) The two measures of discretion, school- and district-level percents of expenditure, listed in the two exhibits were then defined as follows:

School – Level Percent of Expenditure =

$$\frac{\text{Per – Pupil Expenditure Under School Discretion}}{\text{Per – Pupil Expenditure Under School Discretion} + \text{Per – Pupil Expenditure Under District Discretion}}$$

and

District – Level Percent of Expenditure =

$$\frac{\text{Per – Pupil Expenditure Under District Discretion}}{\text{Per – Pupil Expenditure Under School Discretion} + \text{Per – Pupil Expenditure Under District Discretion}}$$

Note that these measures represent our best estimate of the share of total expenditure that is *definitively* under the discretion of schools versus the central district office.

However, we also provide numbers that show our best estimates of the proportion of expenditure that is being spent at the school versus district levels. In this case we cannot make a definitive distinction with respect to discretion—only a claim about where these resources occur.

We make the determination of where expenditures occur by simply reassigning district-level expenditures (i.e., those with SITE>900) that were deemed to be clearly going towards school-level purposes as school-level expenditures in step 1), above. The following are the district-level site codes whose expenditures were reassigned as expenditures devoted to school-level purposes:

Site Code	Site Description
908	CURRICULUM
909	PROFESSIONAL DEVELOPMENT
912	SECONDARY EDUCATION
920	ELEMENTARY EDUCATION
926	CURRIUCULUM & INSTRUCTION
927	PEER ASSISTANCE AND REVIEW
929	VOCATIONAL EDUCATION
930	NEW TEACHER SUPPORT PROG
932	ROTC
933	OAL/OGAL
937	SUMMER HOURLY PROGRAM
950	STATE AND FEDERAL PROGRAMS
967	HIGH SCHOOL NETWORK
968	HEALTH SERVICES
969	STUDENT, FAMILY, COMM. SRVS
975	SPECIAL EDUCATION
986	TECHNOLOGY SERVICES
998	SITE SUPPORT

Exhibits A26 and A27 show that our best estimates of the percent of expenditure *occurring* at the school-level over the periods under investigation ranged from 78 to 85 percent for San Francisco and 83 to 87 percent for Oakland.

Implicit Weight Analysis Methodology

As mentioned in chapter 6, we conducted an analysis that measured the school-level per pupil expenditure relationships with student need and school size for 2002-03 and 2004-05 to 2006-07 in Oakland, and 2000-01 to 2006-07 for San Francisco. For the two districts we investigated the relationships for each year of available data using the following model:

$$School\text{-Level Per-Pupil Expenditure} = f(Student\ Need, Enrollment)$$

Simple regression analysis was used to identify if there were any systematic patterns in school-level per-pupil expenditure that could be explained by student need or enrollment, and whether the expenditure/need and expenditure/enrollment relationships changed over time. The regressions estimated year-specific implicit weights for student need and scale, which represented how school-level per-pupil expenditure varied on average with respect to levels of student poverty and total school enrollment. Moreover, the regressions were run on unrestricted, restricted, and total (both unrestricted and restricted) per-pupil expenditure separately. For Oakland the regressions using total and unrestricted expenditure were also run with and without veteran teacher subsidies. The formal

regression specifications estimated for elementary and middle/high schools, respectively, were as follows.⁶

For Elementary Schools

$$\ln(\text{Per Pupil Expenditure})_{s,t} = \alpha + \beta_1 \ln(1 + FRL_{s,t}) + \beta_2 ENR_{s,t} + \beta_3 ENR^2_{s,t} + \sum_{t=1}^T \delta_t YEAR_t + \sum_{t=1}^T \phi_t \ln(1 + FRL_{s,t}) YEAR_t + \sum_{t=1}^T \varphi_t ENR_{s,t} YEAR_t + \sum_{t=1}^T \gamma_t ENR^2_{s,t} YEAR_t + \varepsilon_{s,t}$$

For Middle/High Schools

$$\ln(\text{Per Pupil Expenditure})_{s,t} = \alpha + \beta_1 \ln(1 + FRL_{s,t}) + \beta_2 ENR_{s,t} + \beta_3 ENR^2_{s,t} + \beta_4 HIGH_{s,t} + \sum_{t=1}^T \delta_t YEAR_t + \sum_{t=1}^T \phi_t \ln(1 + FRL_{s,t}) YEAR_t + \sum_{t=1}^T \varphi_t ENR_{s,t} YEAR_t + \sum_{t=1}^T \gamma_t ENR^2_{s,t} YEAR_t + \sum_{t=1}^T \pi_t HIGH_{s,t} YEAR_t + \varepsilon_{s,t}$$

where,

- s = index of school-specific observations
- t = index of year-specific observations
- $FRL = \ln(1 + \text{School-Level Percent of Pupils Eligible or Receiving Free/Reduced Price Lunch})^7$
- ENR = Total School Enrollment
- $HIGH$ = High School Dummy Indicator Equal to 1 for High Schools and 0 for Middle Schools.
- $YEAR$ = Year-Specific Dummy Indicator Equal to 1 for year t and 0, otherwise.
- α = The average per-pupil expenditure for elementary or middle schools (depending on regression) in the specified pre-implementation reference year (2002-03 for Oakland and 2001-02 for San Francisco).
- β_1 = Estimated implicit student need weight for specified pre-implementation reference year.
- β_2, β_3 = Estimated implicit enrollment weights (linear and quadratic) for specified pre-implementation reference year.
- β_4 = Marginal impact of high school status on average per-pupil expenditure relative to middle school average per-pupil expenditure (i.e., $\alpha + \beta_4$ equals average per-pupil expenditure for high schools in reference year).
- δ_t = Marginal impact of year t relative to specified pre-implementation reference year.
- ϕ_t = Marginal impact of student need in year t relative to estimated implicit student need weight for specified pre-implementation reference year.

⁶ The analysis was run for elementary schools separately and middle/high schools combined. The upper two schooling levels were pooled together due to a lack of sufficient numbers of schools to support individual regressions at the middle and high school levels.

⁷ Note: “ln” is the expression for the natural logarithm.

- φ_t, γ_t = Marginal impacts of (linear and quadratic) enrollment in year t relative to estimated implicit enrollment weight for specified pre-implementation reference year.
- π_t = Marginal impact of high school status in year t relative to estimated implicit student need weight for specified pre-implementation reference year.
- $\varepsilon_{s,t}$ = School-level random error term.⁸

Year-specific combinations of the estimated parameters lead to implicit weight measures across the years. Note, that estimation of the year-specific implicit weights can (and has) been performed more directly by running individual year-specific regressions of the following forms (notice the dropping of *YEAR* and the t subscripts, as this equation is estimated separately for each year):

$$\ln(\text{Per Pupil Expenditure})_s = \alpha + \beta_1 \ln(1 + FRL_s) + \beta_2 ENR_s + \beta_3 ENR_s^2 + \varepsilon_s$$

$$\ln(\text{Per Pupil Expenditure})_s = \alpha + \beta_1 \ln(1 + FRL_s) + \beta_2 ENR_s + \beta_3 ENR_s^2 + \beta_4 HIGH_s + \varepsilon_s$$

Aside from being more intensive in terms of having to run a regression for each year, this approach does not lend itself to testing for significant differences in implicit weights across years. Nevertheless, the year-specific regressions do allow one to directly examine the individual implicit weight estimates from year to year. To this end, Exhibits A57 and A58 contains output of the year-specific regressions run for each district.

The regression results were then used to formulate the following equations capable of calculating the expected per-pupil expenditure for school i in each year t :

$$\text{School-Level Per-Pupil Expenditure}_{i,t} = \text{Average Per-Pupil Expenditure}_t \times \text{Implicit Student Need Adjustment}_{i,t} \times \text{Implicit Enrollment Adjustment}_{i,t}$$

where the adjustments are based on a school’s need/enrollment and the estimated implicit weights for the given year. The implicit student need adjustment simply dictates how much more a school with a given level of poverty is expected to spend per-pupil relative to a school with zero poverty. Similarly, the implicit enrollment adjustment denotes, on average, how much more or less a school with a given enrollment spends relative to the average sized school.

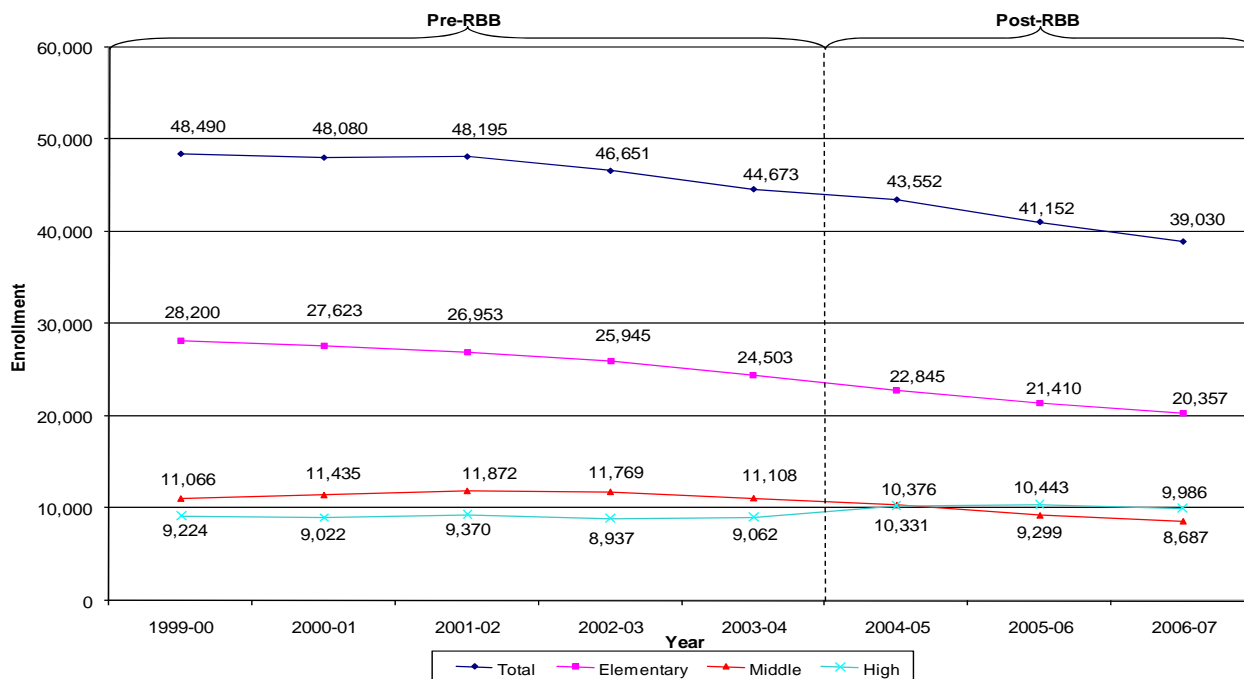
Evaluation of the implicit student need adjustment profiles over the full range of poverty (i.e., from 0 to 100 percent) across years shows whether the relationship between student need and expenditure became stronger with the advent of the policies. The analysis therefore uses the magnitude of the estimated expenditure/student need relationship as a gauge to answer the question of whether the policies implemented were associated with an increase in the equity with which resources were distributed (i.e., a stronger relationship between expenditure and student need implies an increase in resource equity). Appendix C contains the results of formal significance tests of the equality of the estimated year-specific implicit student need weights.

⁸ The error terms are assumed to be independent across schools, but not within schools across years. To this end, robust standard errors are calculated for all of the regressions that take into account this form of group-clustered heteroskedasticity, where the group is an individual school. Standard errors that do not adjust for clustered error terms tend to overstate the precision with which parameters are estimated.

Appendix C: Additional Analyses

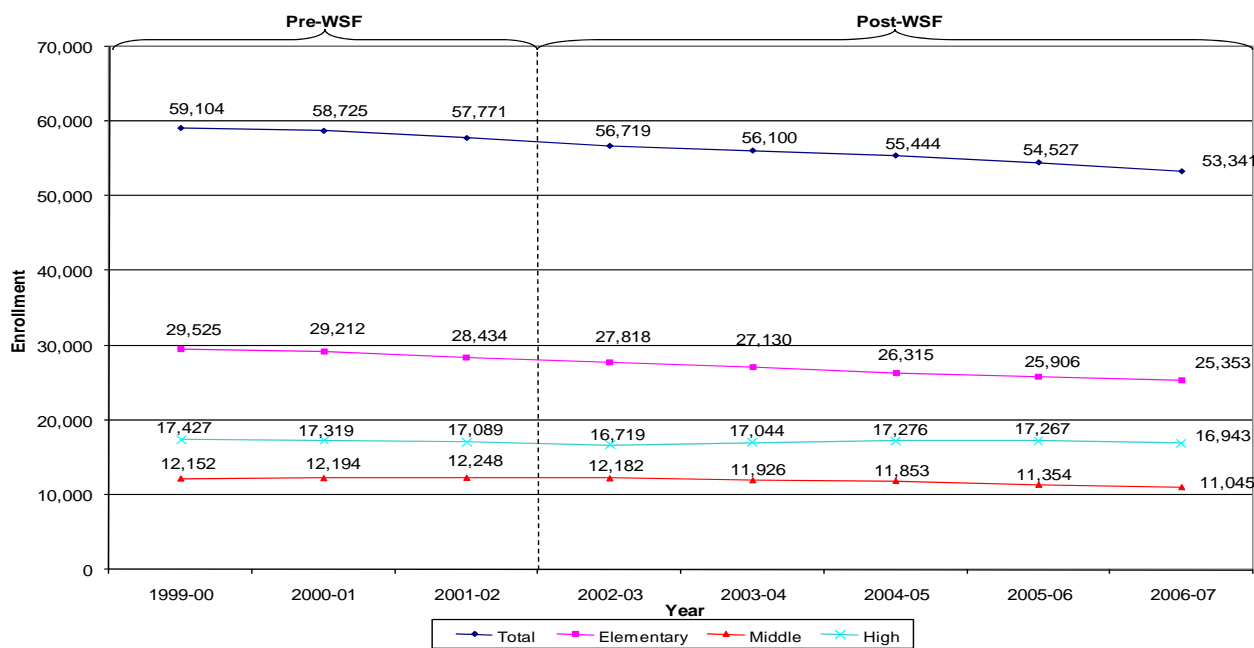
Total and Average Enrollment Trends

Exhibit A7: Total Enrollment of Oakland Elementary, Middle and High Schools from 2000-01 to 2006-07



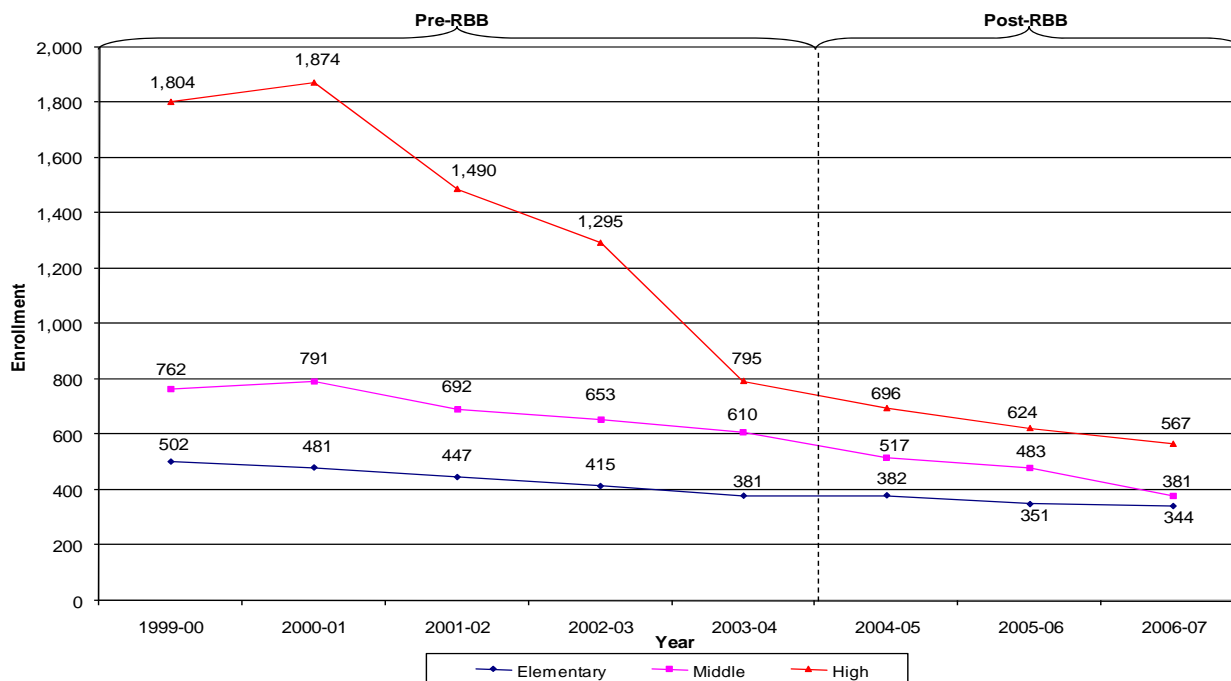
Source: California Department of Education (CDE) School Information Form, Section B database available online at <http://dq.cde.ca.gov/DataQuest/downloads/sifenr.asp>.

Exhibit A8: Total Enrollment of San Francisco Elementary, Middle and High Schools from 2000-01 to 2006-07



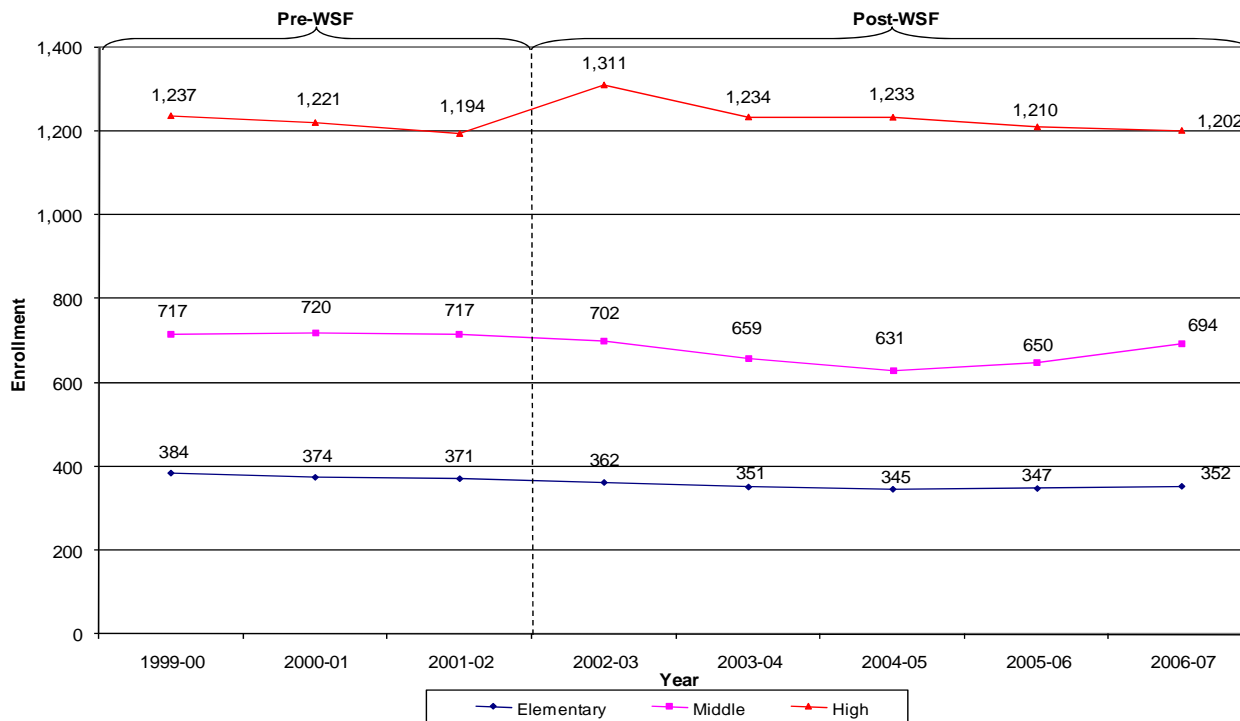
Source: California Department of Education (CDE) School Information Form, Section B database available online at <http://dq.cde.ca.gov/DataQuest/downloads/sifenr.asp>.

Exhibit A9: Average Enrollment of Oakland Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Department of Education (CDE) School Information Form, Section B database available online at <http://dq.cde.ca.gov/DataQuest/downloads/sifenr.asp>.

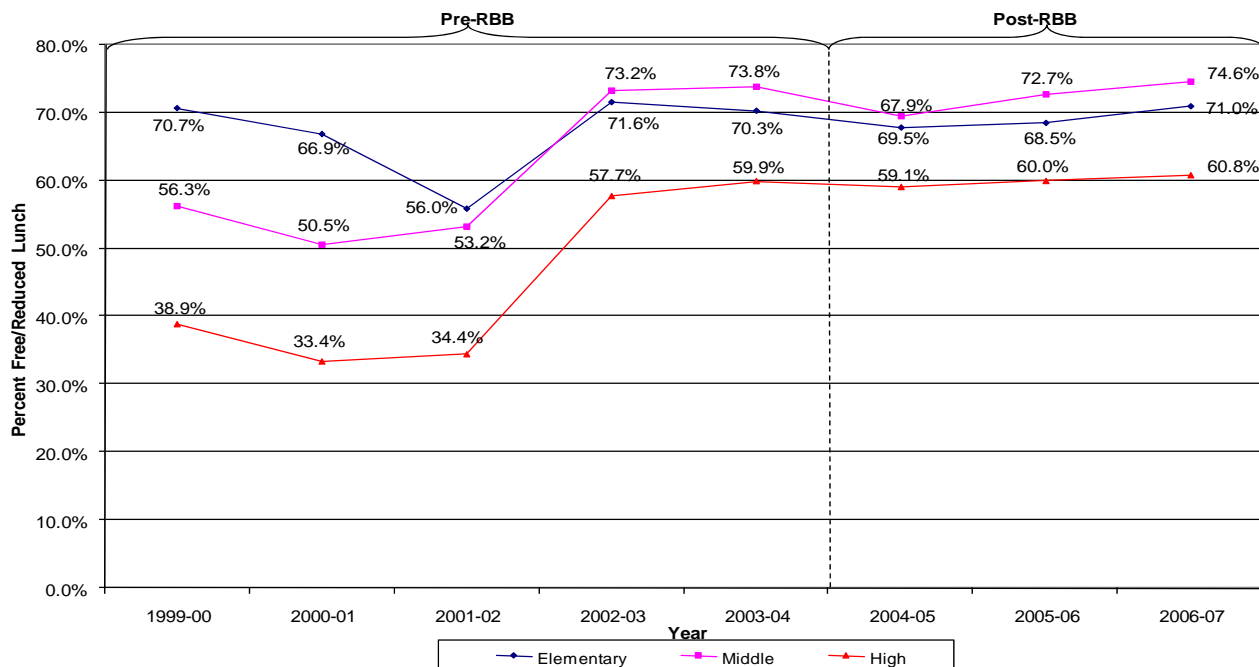
Exhibit A10: Average Enrollment of San Francisco Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Department of Education (CDE) School Information Form, Section B database available online at <http://dq.cde.ca.gov/DataQuest/downloads/sifenr.asp>.

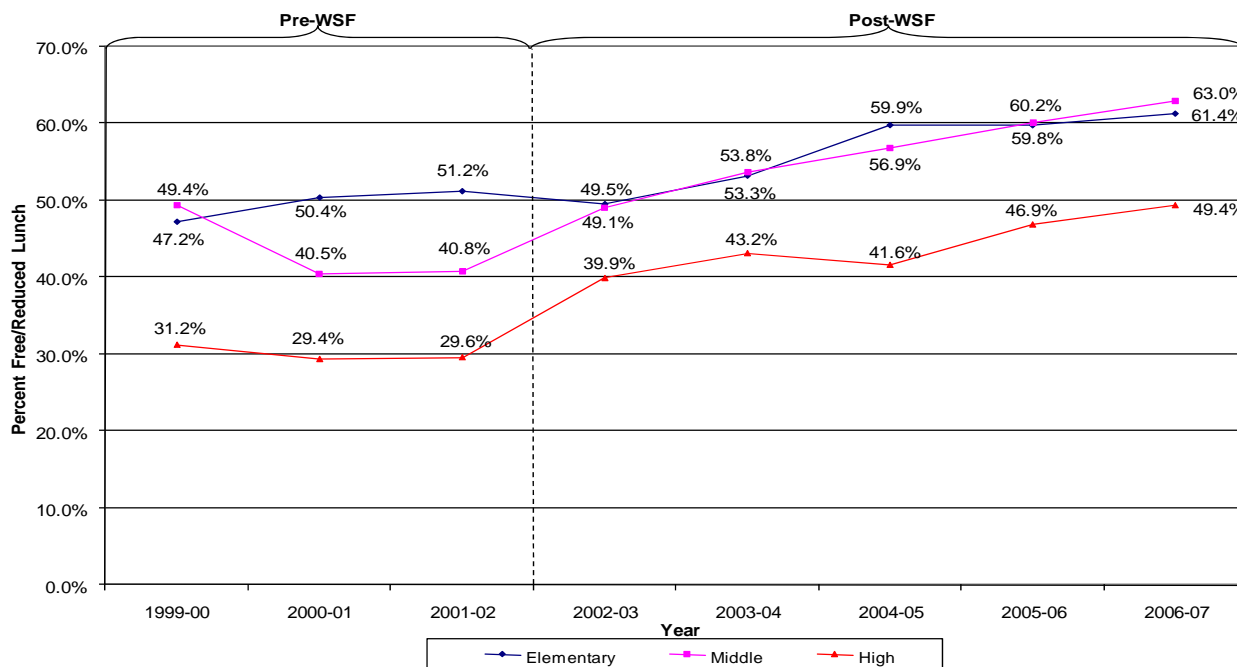
Poverty Trends

Exhibit A11: Average Percent of Students Eligible for Free/Reduced Lunch in Oakland Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Work Opportunity (CalWORKS) data file available online at <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>.

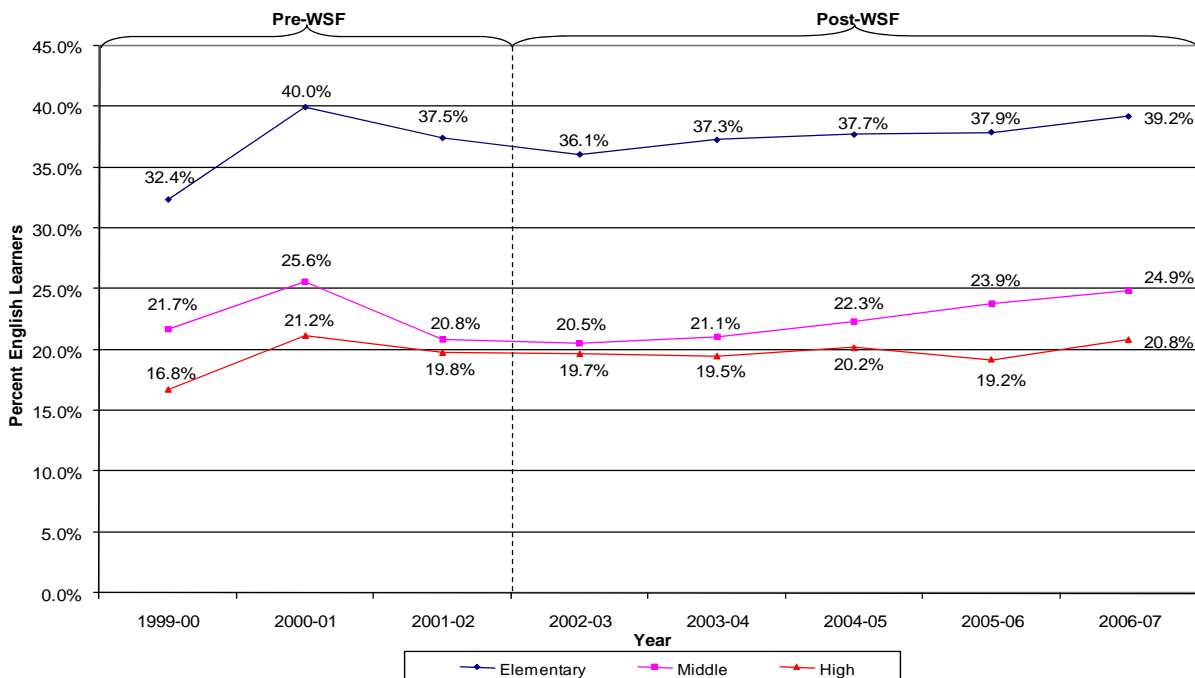
Exhibit A12: Average Percent of Students Eligible for Free/Reduced Lunch in San Francisco Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Work Opportunity (CalWORKS) data file available online at <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>.

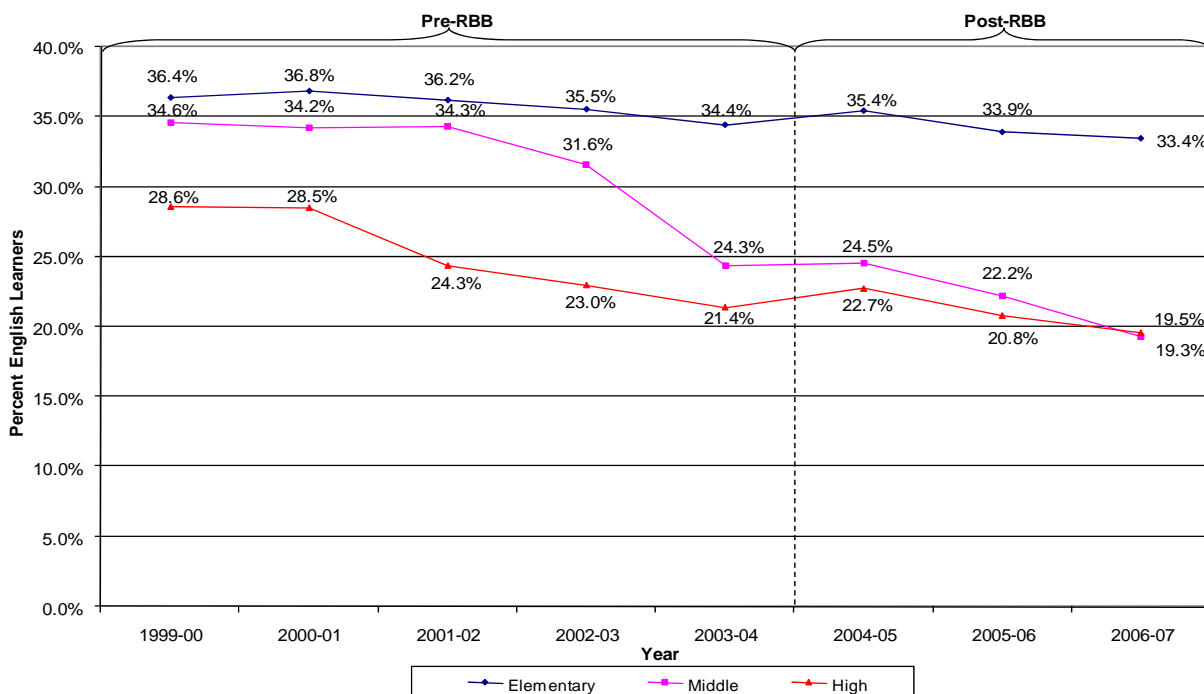
English Learner (EL) Trends

Exhibit A13: Average Percent of English Learners in San Francisco Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Department of Education (CDE) Base Academic Performance Index (API) available online at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>.

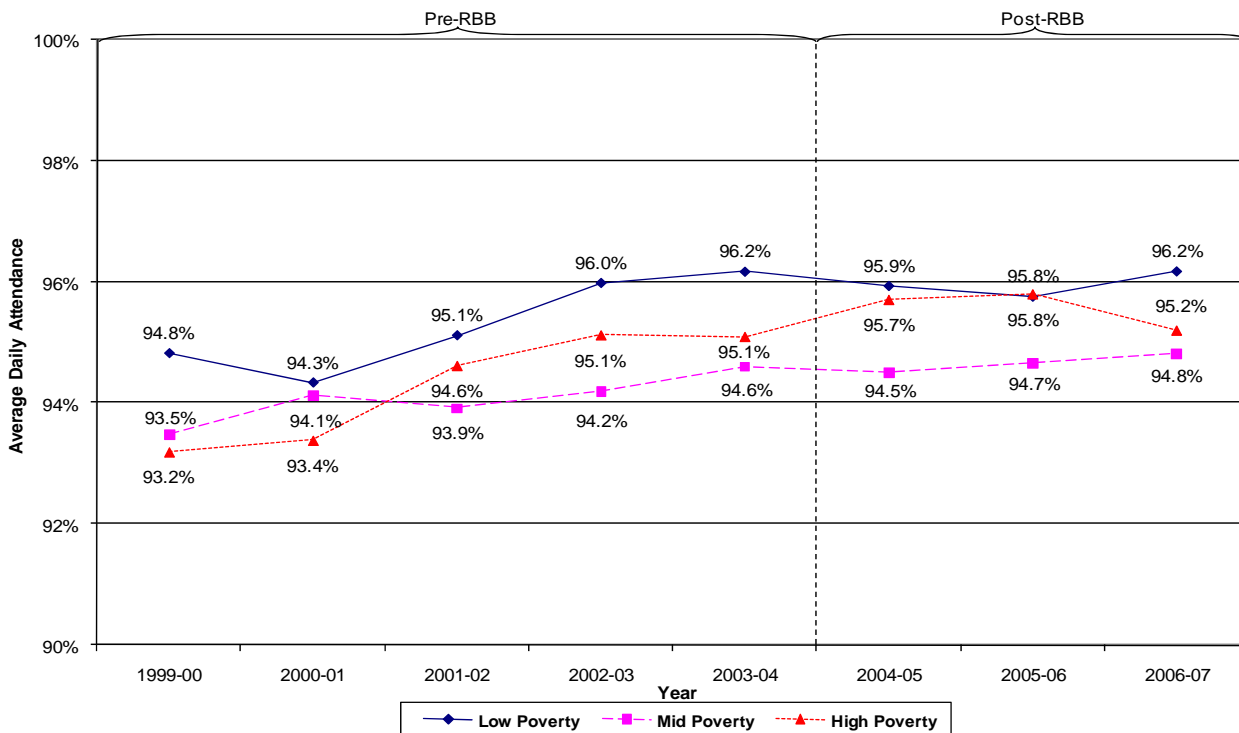
Exhibit A14: Average Percent of English Learners in Oakland Elementary, Middle and High Schools from 2000-01 to 2006-07



Source: California Department of Education (CDE) Base Academic Performance Index (API) available online at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>.

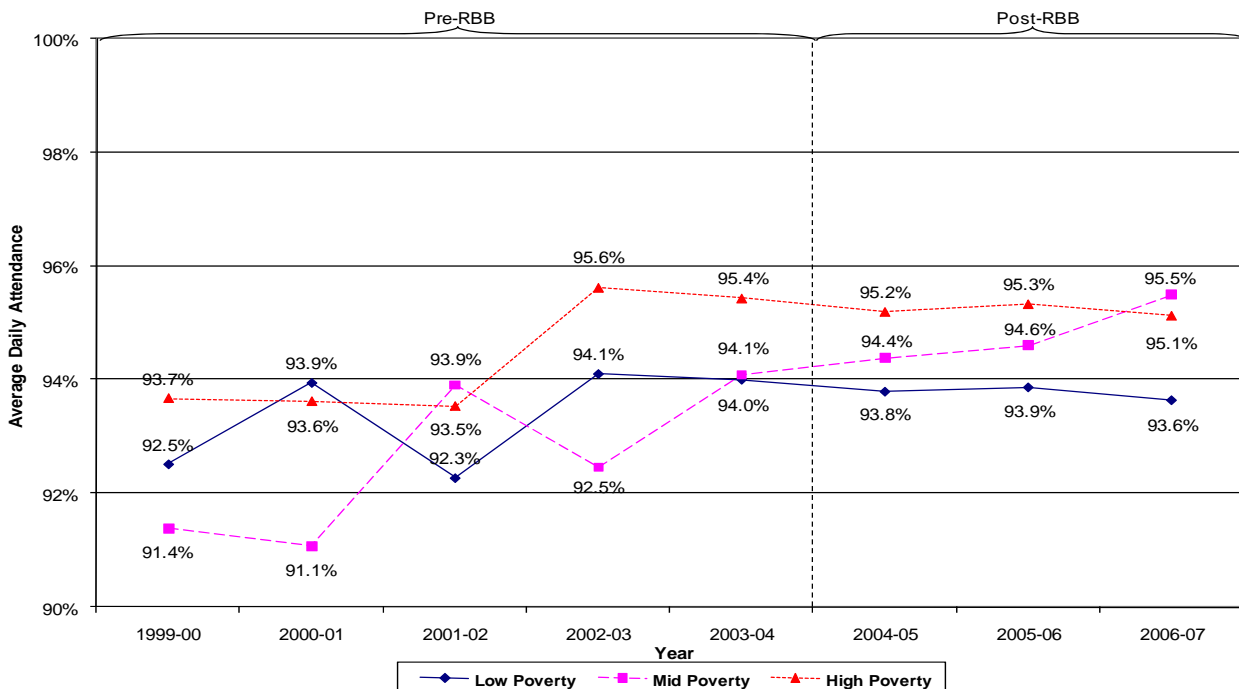
Average Daily Attendance (ADA) in Oakland

Exhibit A15: Average Daily Attendance (ADA) for Oakland Elementary Schools from 1999-2000 to 2006-07



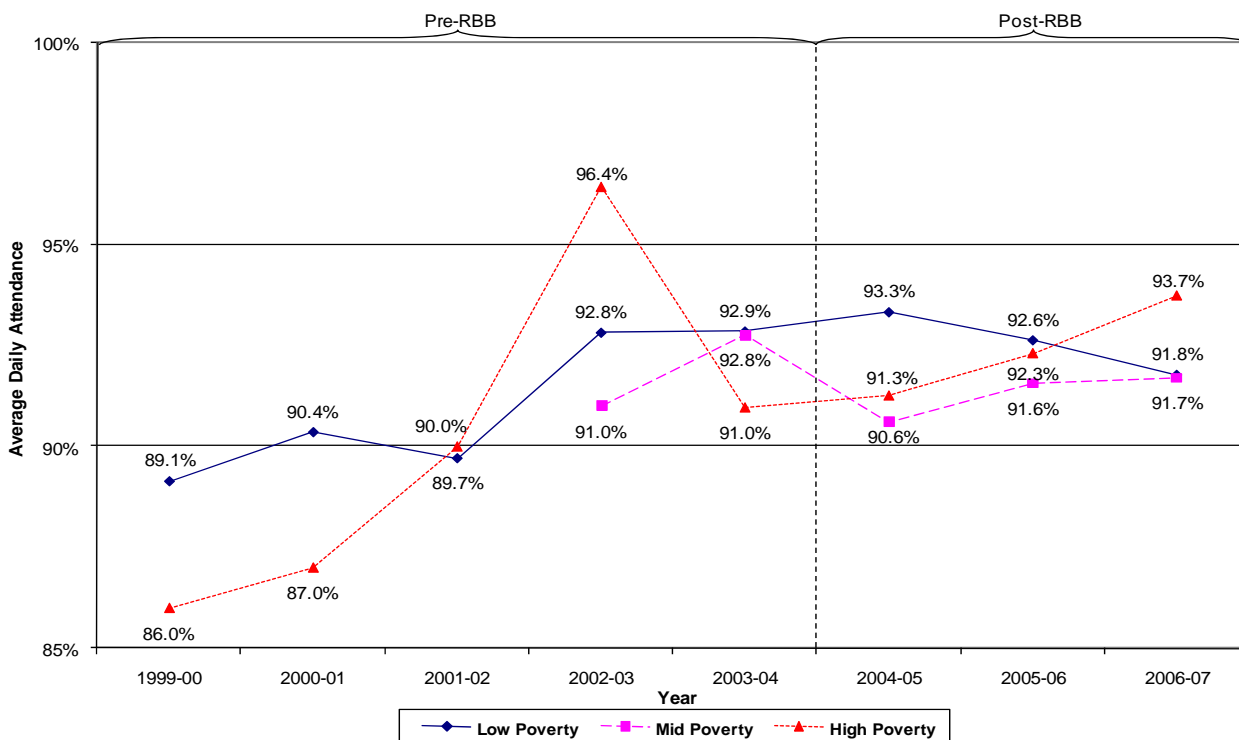
Source: District-provided average daily attendance, 1999-2000 through 2006-07

Exhibit A16 – Average Daily Attendance (ADA) for Oakland Middle Schools from 1999-2000 to 2006-07



Source: District-provided average daily attendance, 1999-2000 through 2006-07

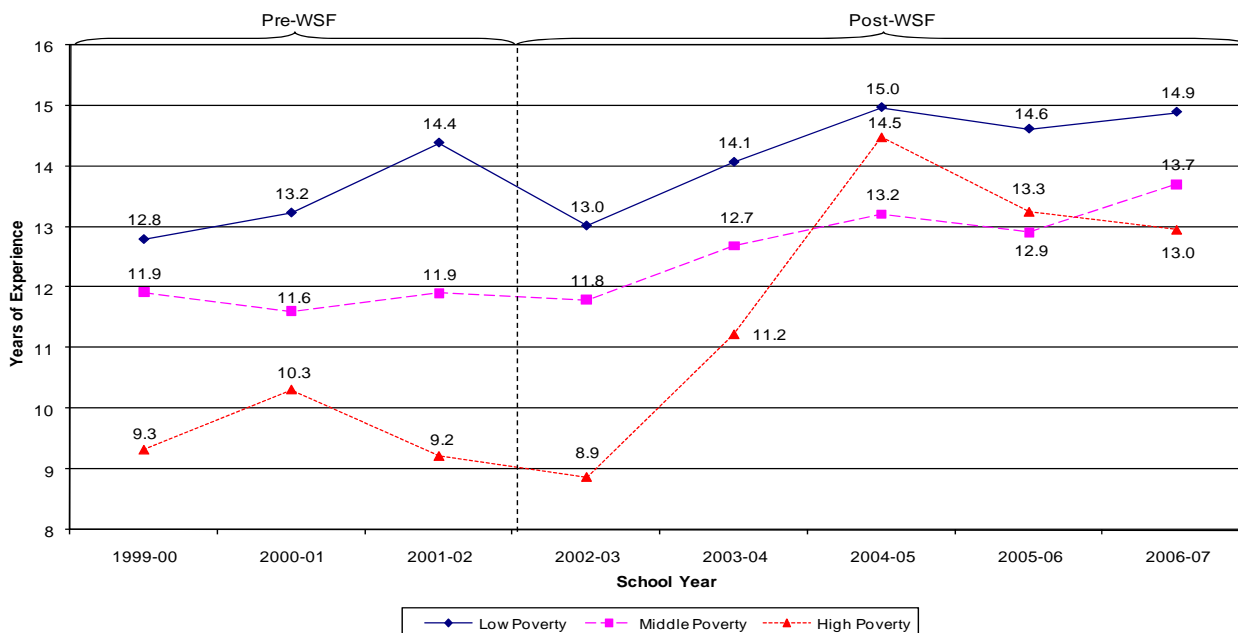
Exhibit A17 – Average Daily Attendance (ADA) for Oakland High Schools from 1999-2000 to 2006-07



Source: District-provided average daily attendance, 1999-2000 through 2006-07

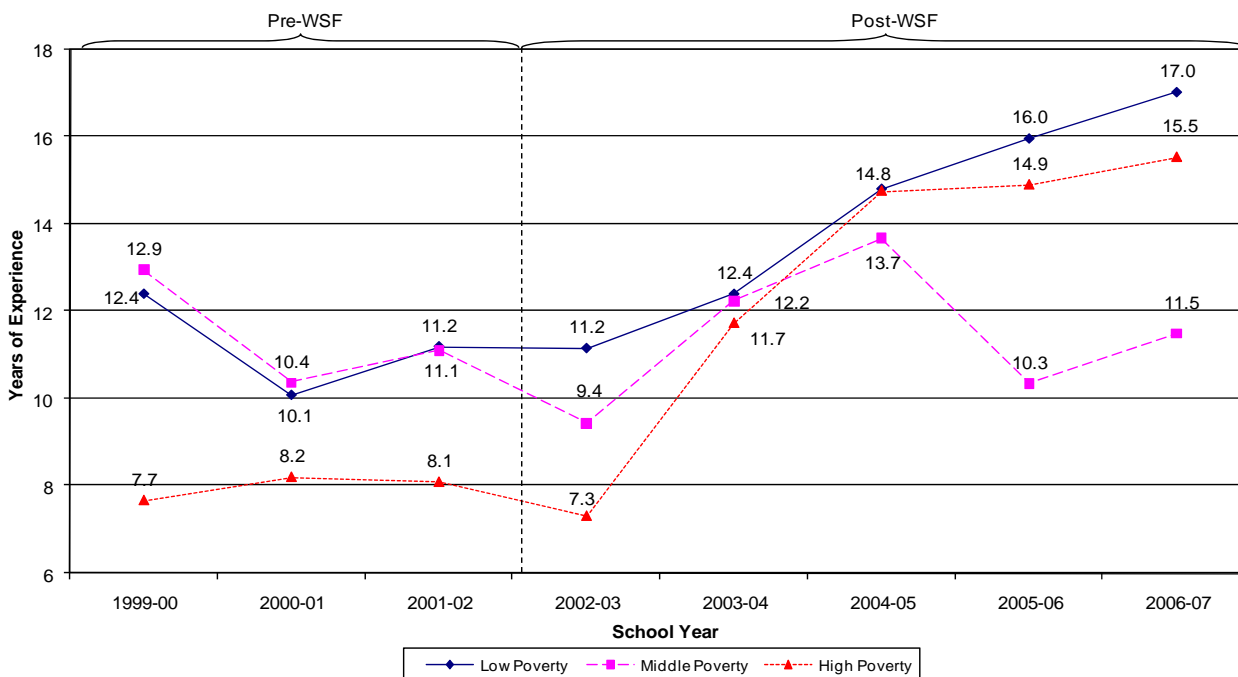
Distribution of Teacher Experience

Exhibit A18: Average Years of Teaching Experience for San Francisco Teachers Authorized and Assigned in Elementary Education



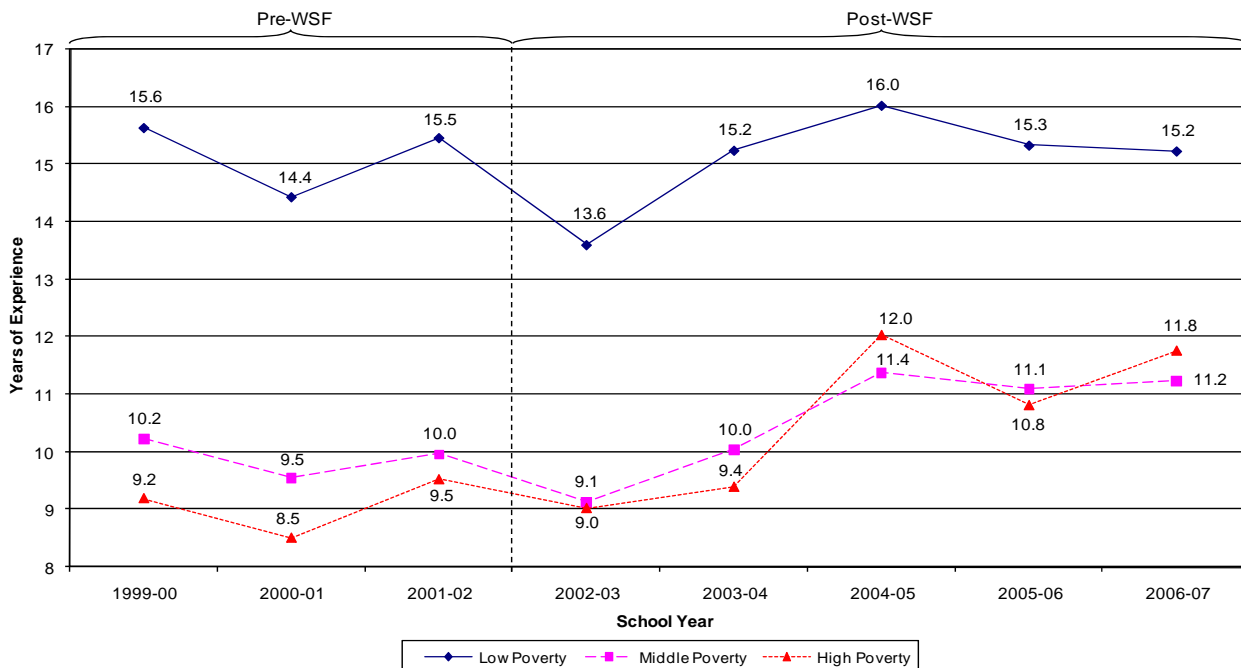
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A19: Average Years of Teaching Experience for San Francisco Middle School Teachers Authorized and Assigned in 5 Core Courses



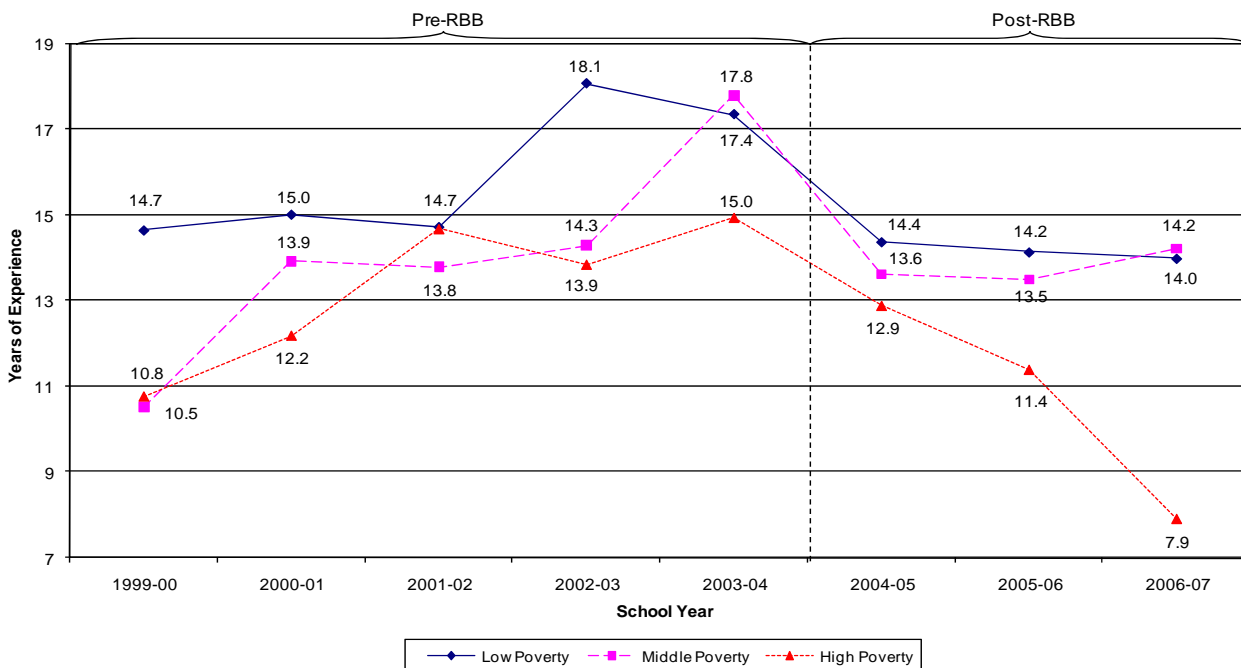
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively. Note: Core subjects include English, Math, Science, Social Studies and Foreign Languages.

Exhibit A20: Average Years of Teaching Experience for San Francisco High School Teachers Authorized and Assigned in 5 Core Courses



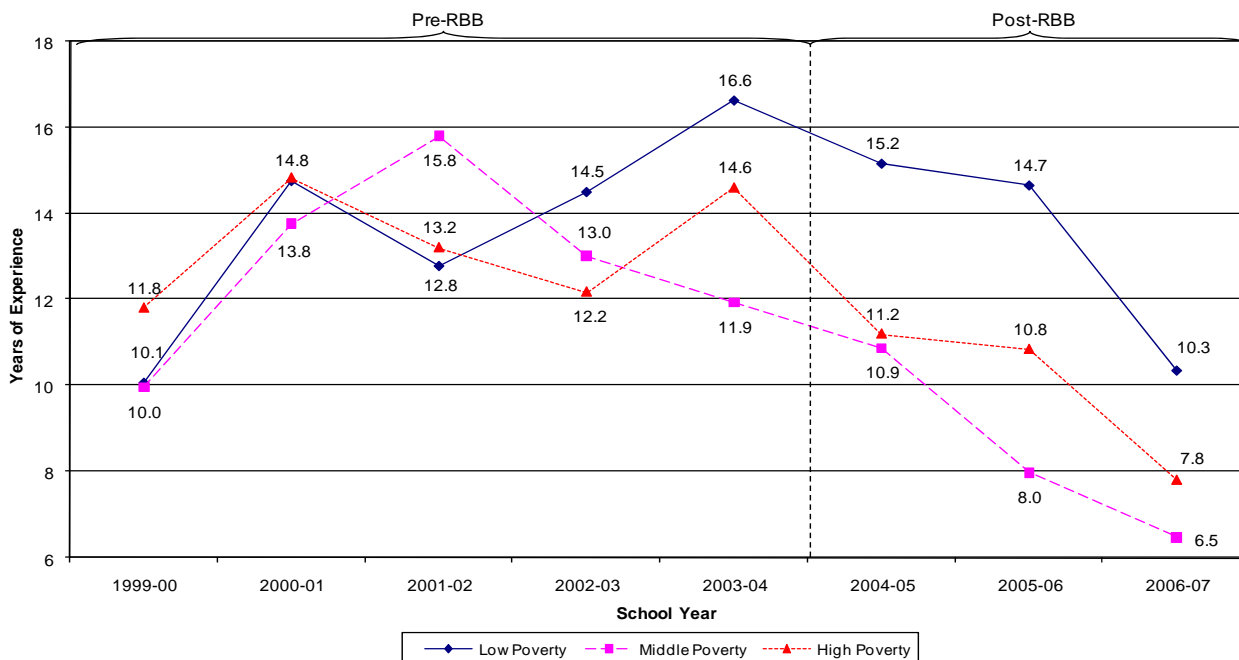
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively. Note: Core subjects include English, Math, Science, Social Studies and Foreign Languages.

Exhibit A21: Average Years of Teaching Experience for Oakland Teachers Authorized and Assigned in Elementary Education



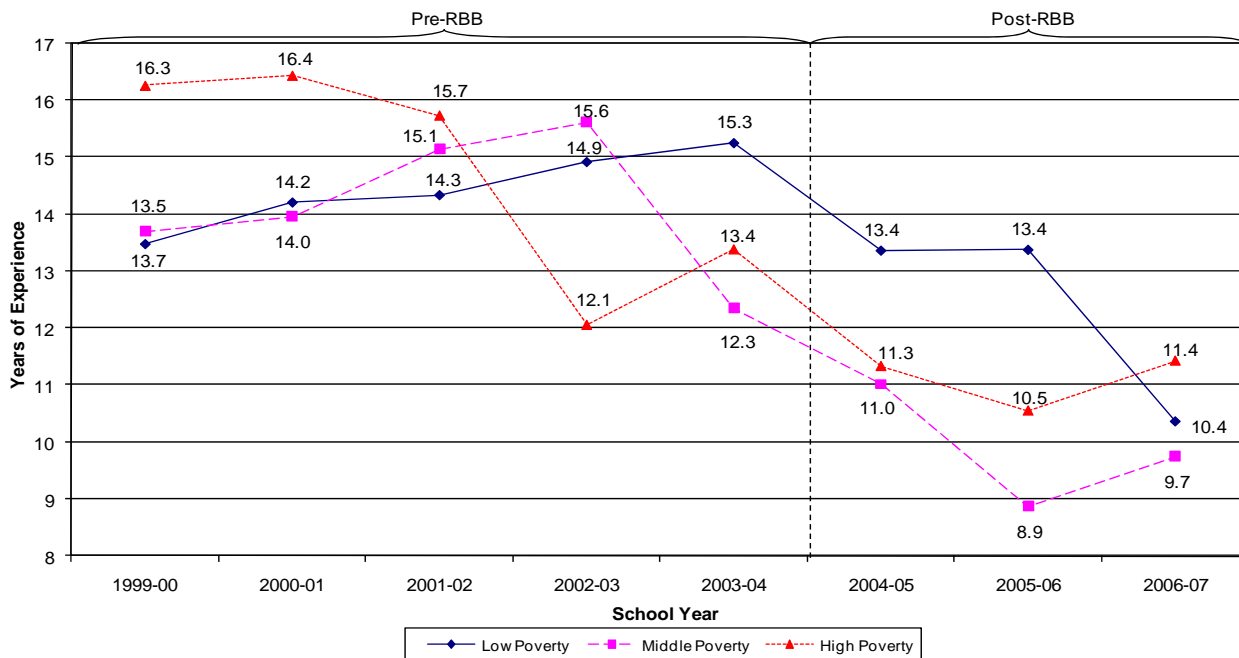
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A22: Average Years of Teaching Experience for Oakland Middle School Teachers Authorized and Assigned in 5 Core Courses



Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively. Note: Core subjects include English, Math, Science, Social Studies and Foreign Languages.

Exhibit A23: Average Years of Teaching Experience for Oakland High School Teachers Authorized and Assigned in 5 Core Course



Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively. Note: Core subjects include English, Math, Science, Social Studies and Foreign Languages.

Exhibit A24: Average Teaching Experience by Schooling and Poverty Level for Oakland Schools (and * Denote Significant Differences Between Low and High Poverty Schools at 5%- and 10%-Levels, Respectively)**

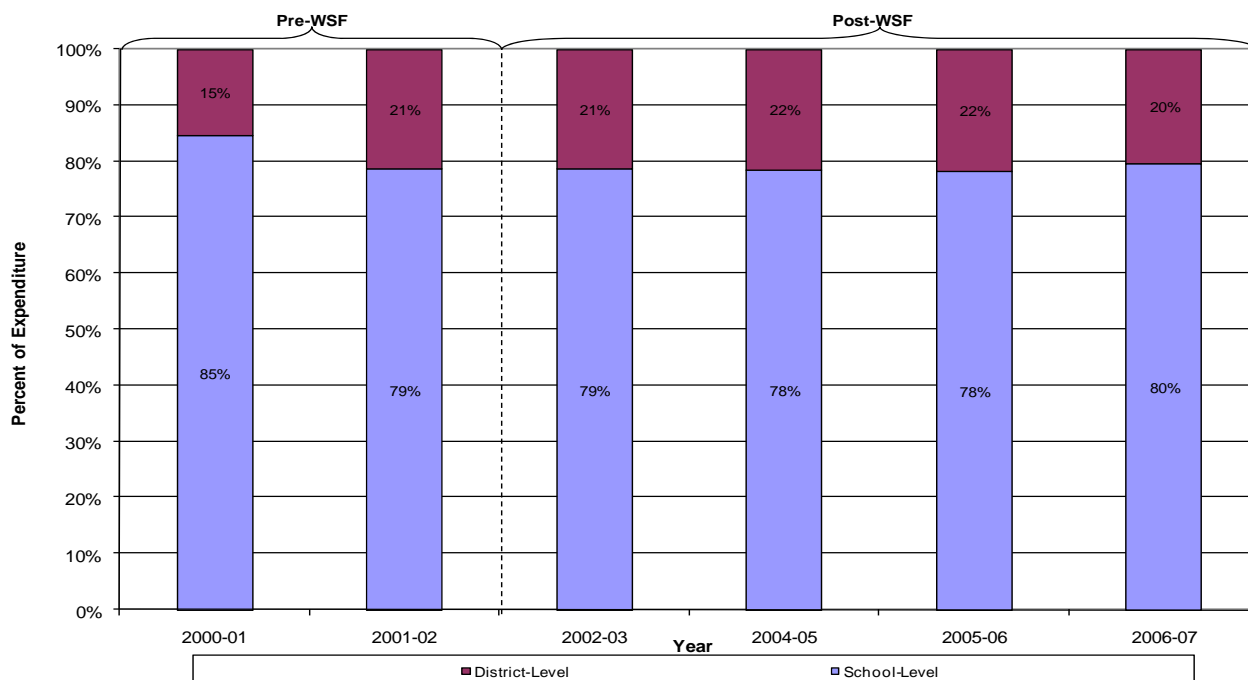
District	Schooling Level	Year	Low Poverty	Middle Poverty	High Poverty	Low/High Poverty Difference
Oakland	Elementary	1999-00	14.94	11.23	11.52	-3.42**
		2000-01	14.18	13.39	12.06	-2.12*
		2001-02	13.65	13.30	13.36	-0.29
		2002-03	15.68	12.72	13.19	-2.49**
		2003-04	14.93	14.70	12.54	-2.38**
		2004-05	14.18	14.32	13.06	-1.12
		2005-06	14.91	13.88	12.11	-2.8*
		2006-07	15.26	14.37	8.40	-6.85**
	Middle	1999-00	10.73	9.73	10.59	-0.14
		2000-01	11.34	10.32	10.89	-0.45
		2001-02	11.96	10.82	9.36	-2.6
		2002-03	13.23	9.77	9.47	-3.76**
		2003-04	14.03	10.93	11.51	-2.52
		2004-05	14.43	10.63	9.86	-4.57**
		2005-06	13.85	9.21	9.44	-4.41**
		2006-07	12.37	7.32	8.40	-3.97**
	High	1999-00	13.73	14.47	16.74	3.02
		2000-01	14.86	15.47	17.06	2.21
		2001-02	15.03	15.69	16.52	1.49
		2002-03	14.56	15.95	12.56	-2
		2003-04	15.69	12.63	15.19	-0.5
		2004-05	14.08	12.80	12.36	-1.72
		2005-06	13.88	9.15	12.57	-1.31
		2006-07	12.52	10.25	11.34	-1.19

Exhibit A25: Average Teaching Experience by Schooling and Poverty Level for San Francisco Schools (and * Denote Significant Differences Between Low and High Poverty Schools at 5%- and 10%-Levels, Respectively)**

District	Schooling Level	Year	Low Poverty	Middle Poverty	High Poverty	Low/High Poverty Difference
San Francisco	Elementary	1999-00	12.89	11.84	9.62	-3.27**
		2000-01	12.87	10.91	9.81	-3.06**
		2001-02	13.56	11.62	9.66	-3.91**
		2002-03	12.45	11.50	9.06	-3.39**
		2003-04	13.48	12.54	11.14	-2.34**
		2004-05	14.52	13.42	14.68	0.15
		2005-06	14.26	13.23	13.42	-0.84
		2006-07	14.58	13.32	13.44	-1.15
	Middle	1999-00	13.78	13.74	11.57	-2.21
		2000-01	12.60	12.04	11.67	-0.93
		2001-02	14.08	12.50	10.92	-3.16
		2002-03	13.00	10.78	10.16	-2.85
		2003-04	13.61	11.29	13.80	0.19
		2004-05	15.36	13.61	14.58	-0.77
		2005-06	16.91	11.52	14.88	-2.03
		2006-07	17.51	11.42	15.03	-2.48
	High	1999-00	16.99	12.01	10.54	-6.45**
		2000-01	15.90	11.61	9.19	-6.71**
		2001-02	16.22	11.10	10.33	-5.88**
		2002-03	14.29	9.65	10.24	-4.05**
		2003-04	15.55	10.70	10.85	-4.69**
		2004-05	16.60	12.39	12.83	-3.77*
		2005-06	16.19	12.07	12.34	-3.85*
		2006-07	16.09	12.46	12.88	-3.21

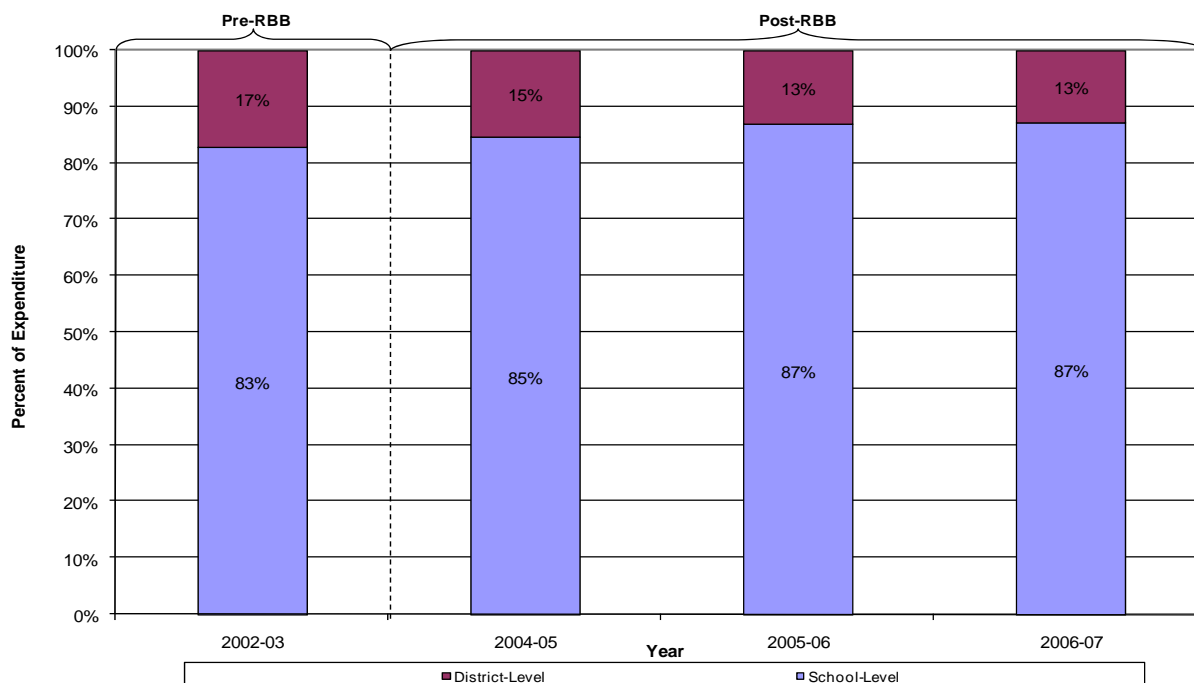
Alternative Analyses of Budgetary Discretion

Exhibit A26: Share of Selected San Francisco Per-Pupil Expenditure* by Alternative Measure of District/School Discretion from 2002-03 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.
 * Expenditure does not include the following object categories: Capital Outlay, Other Financing Uses or Other Outgoing Expenditures.

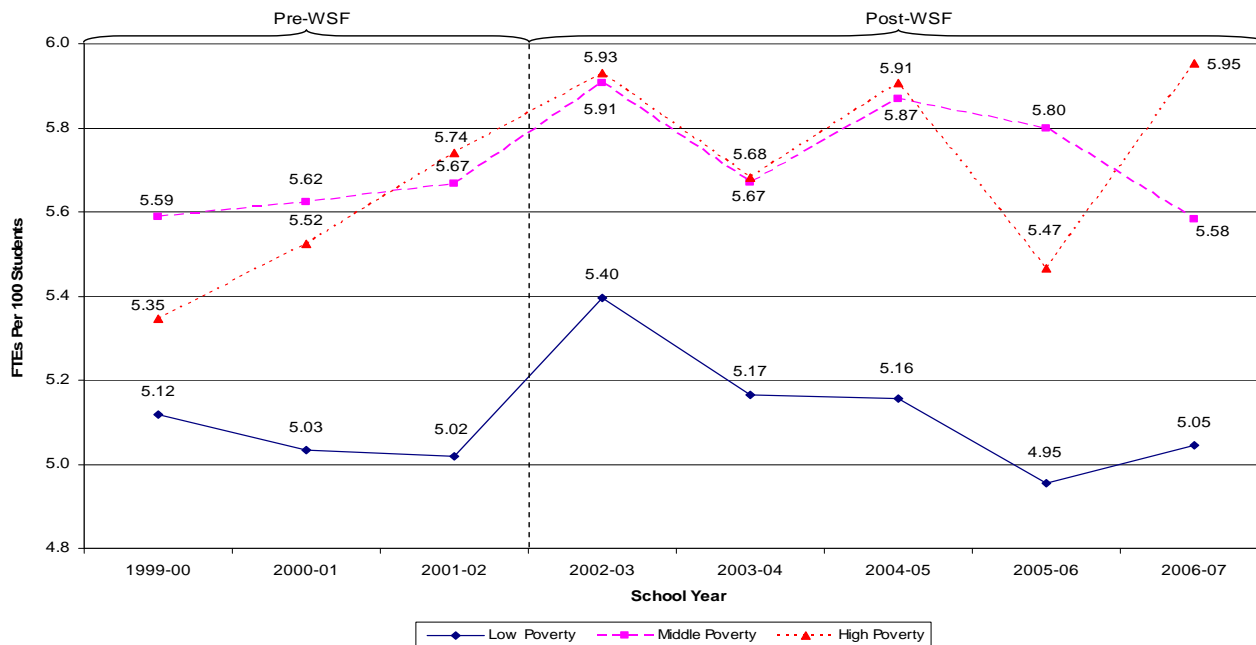
Exhibit A27: Share of Selected Oakland Per-Pupil Expenditure* by Alternative Measure of District/School Discretion from 2002-03 and 2004-05 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.
 * Note: Expenditure does not include the following object categories: Capital Outlay, Other Financing Uses or Other Outgoing Expenditures.

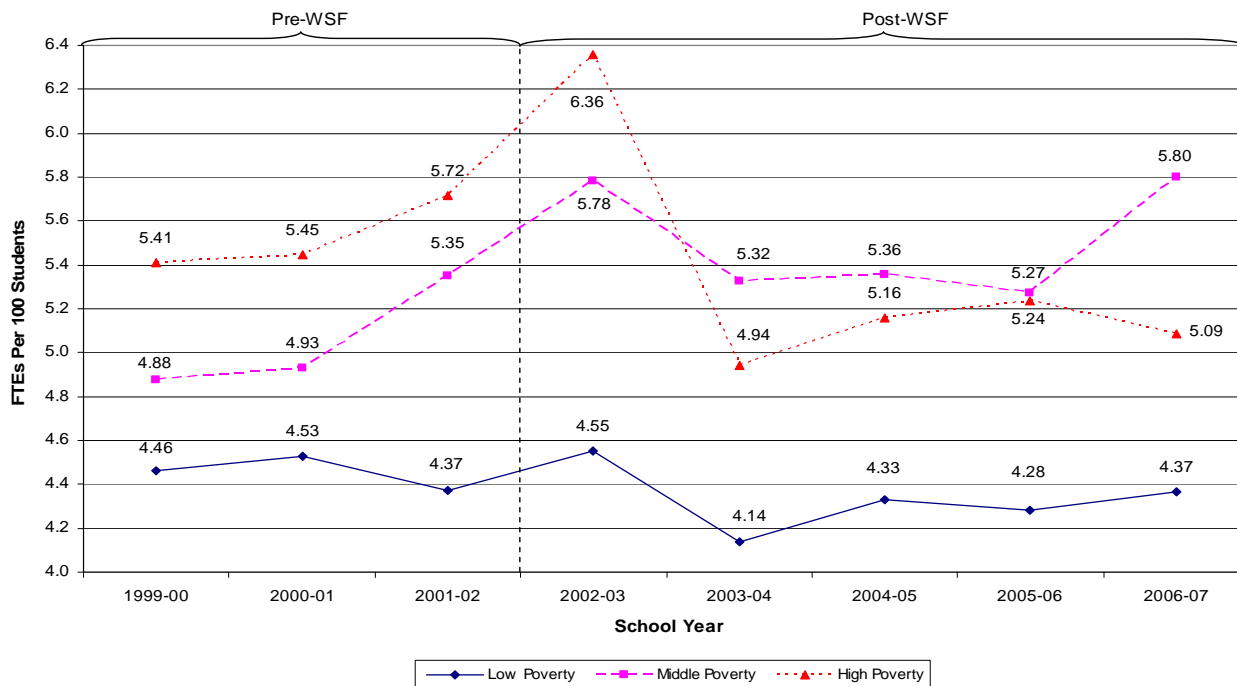
Analysis of FTE-per-100 Students

Exhibit A28: Teacher FTEs Per 100 Students for San Francisco Elementary Schools



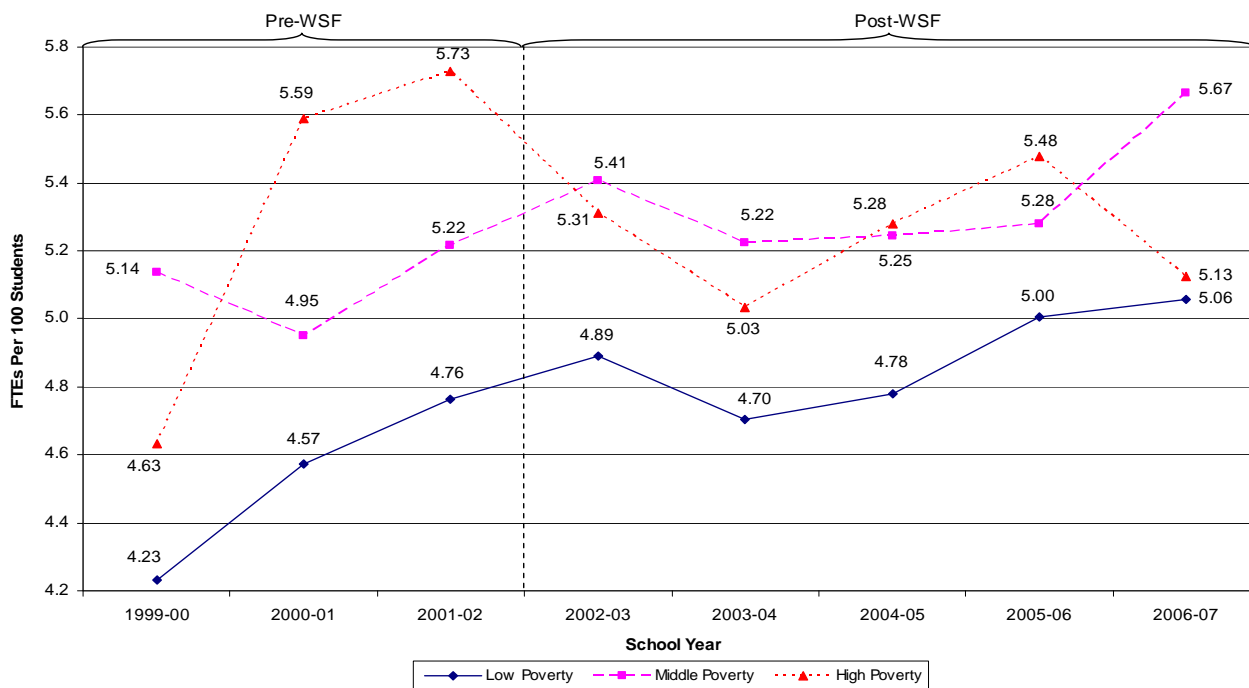
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A29: Teacher FTEs Per 100 Students for San Francisco Middle Schools



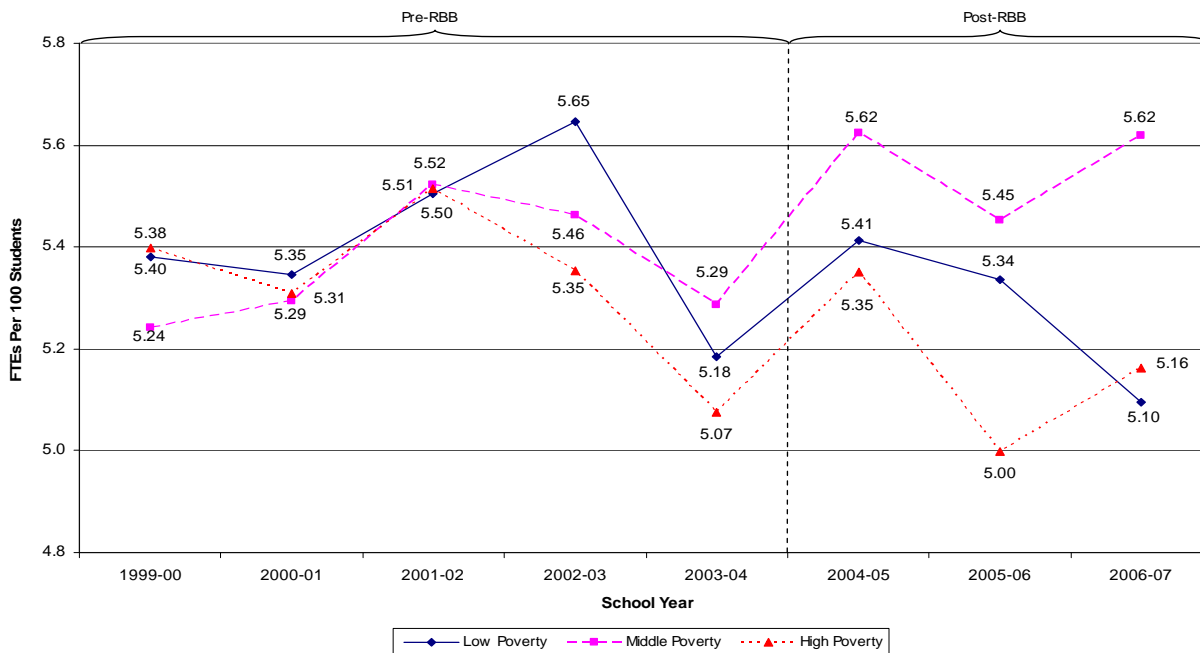
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A30: Teacher FTEs Per 100 Students for San Francisco High Schools



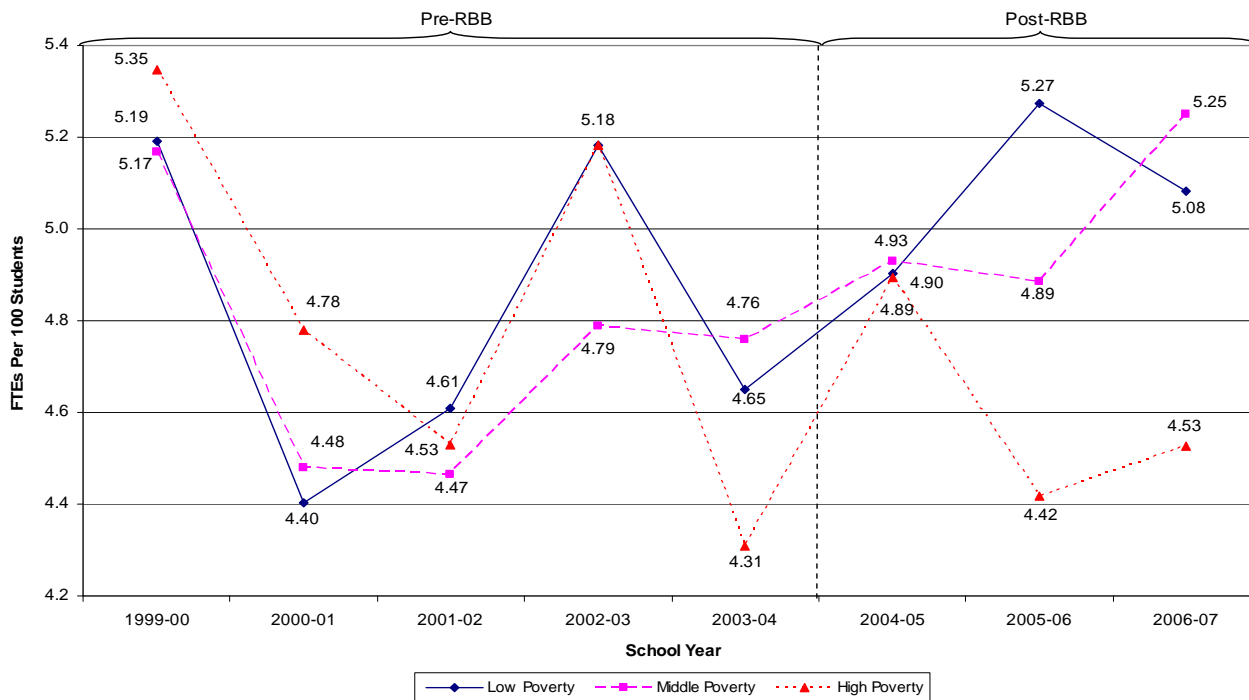
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CaWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A31: Teacher FTEs Per 100 Students for Oakland Elementary Schools



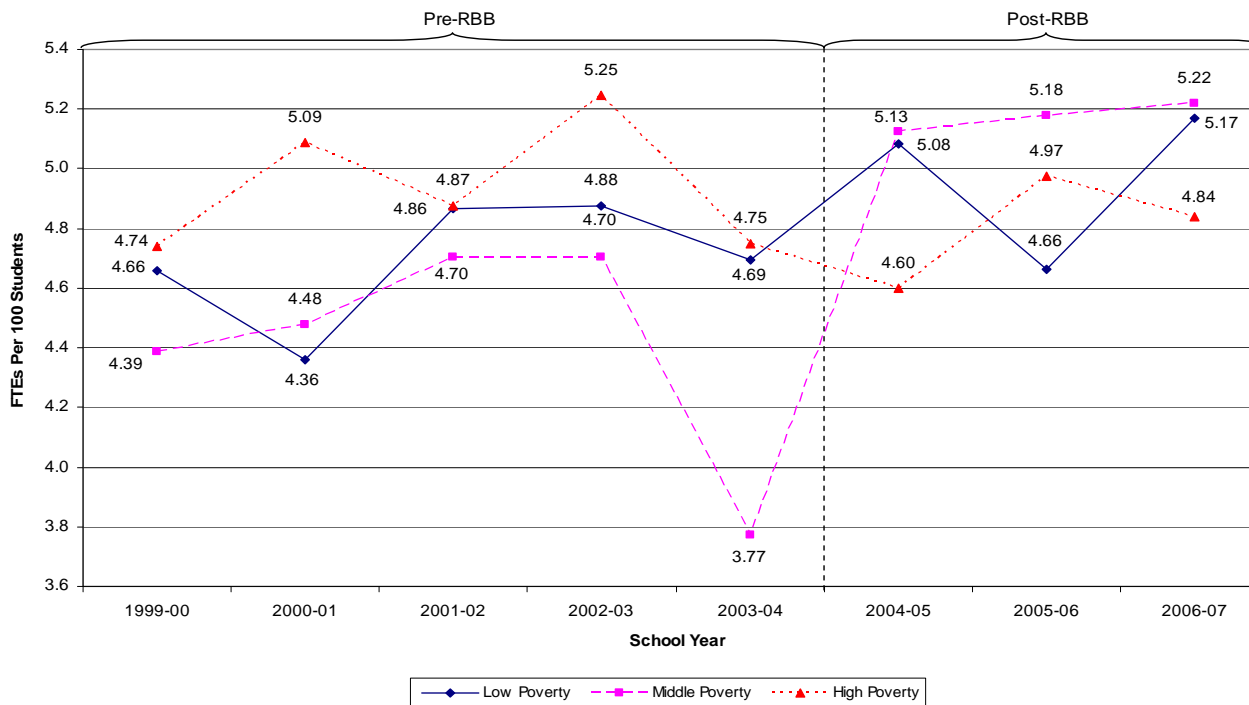
Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CaWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A32: Teacher FTEs Per 100 Students for Oakland Middle Schools



Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

Exhibit A33: Teacher FTEs Per 100 Students for Oakland High Schools



Source: California Department of Education (CDE) Personnel Assignment Information File 1999-00 through 2006-07 and California Work Opportunity (CalWORKS). Data files available online at <http://www.cde.ca.gov/ds/ss/cb/filespaif.asp> and <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>, respectively.

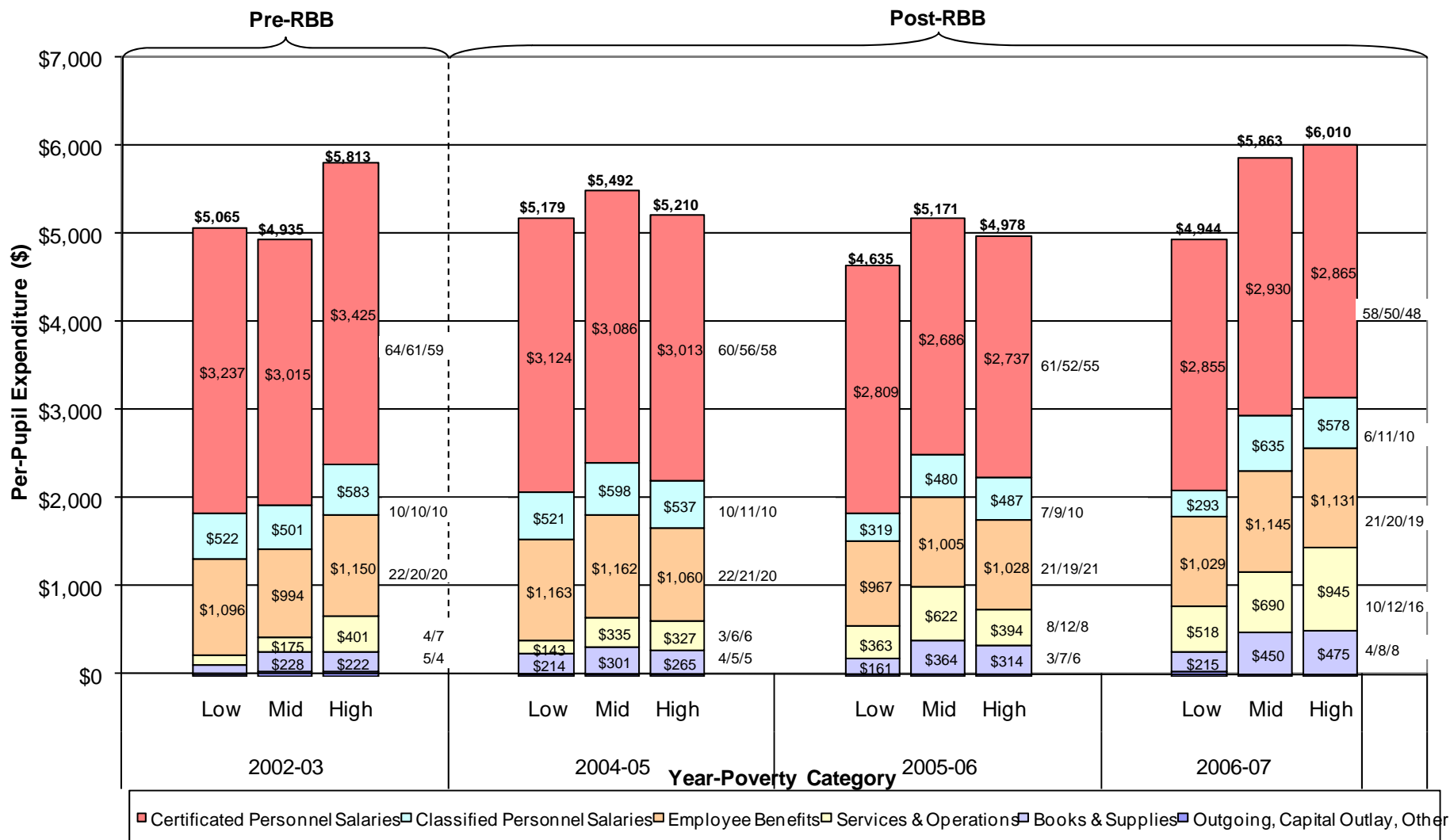
Exhibit A34: Estimates of Inflation for San Francisco and Oakland's Per-Pupil Spending

San Francisco	2000-01	2006-07	% increase
Per pupil spending			
Elementary schools	\$ 4,003	\$ 5,037	26%
Middle schools	\$ 3,577	\$ 4,444	24%
High schools	\$ 4,176	\$ 4,401	5%
Indices of inflation			
Consumer Price Index in the SF Bay Area*	100	114	14%
Employment Cost Index**	100	125	25%
Oakland	2002-03	2006-07	
Per pupil spending			
Elementary schools	\$ 5,383	\$ 6,310	17%
Middle schools	\$ 5,196	\$ 5,564	7%
High schools	\$ 4,895	\$ 5,111	4%
Indices of inflation			
Consumer Price Index in the SF Bay Area*	107	114	7%
Employment Cost Index**	111	125	13%

*The Consumer Price Index may be found at <http://www.abag.ca.gov/abag/overview/datacenter/retail/cpi.html>

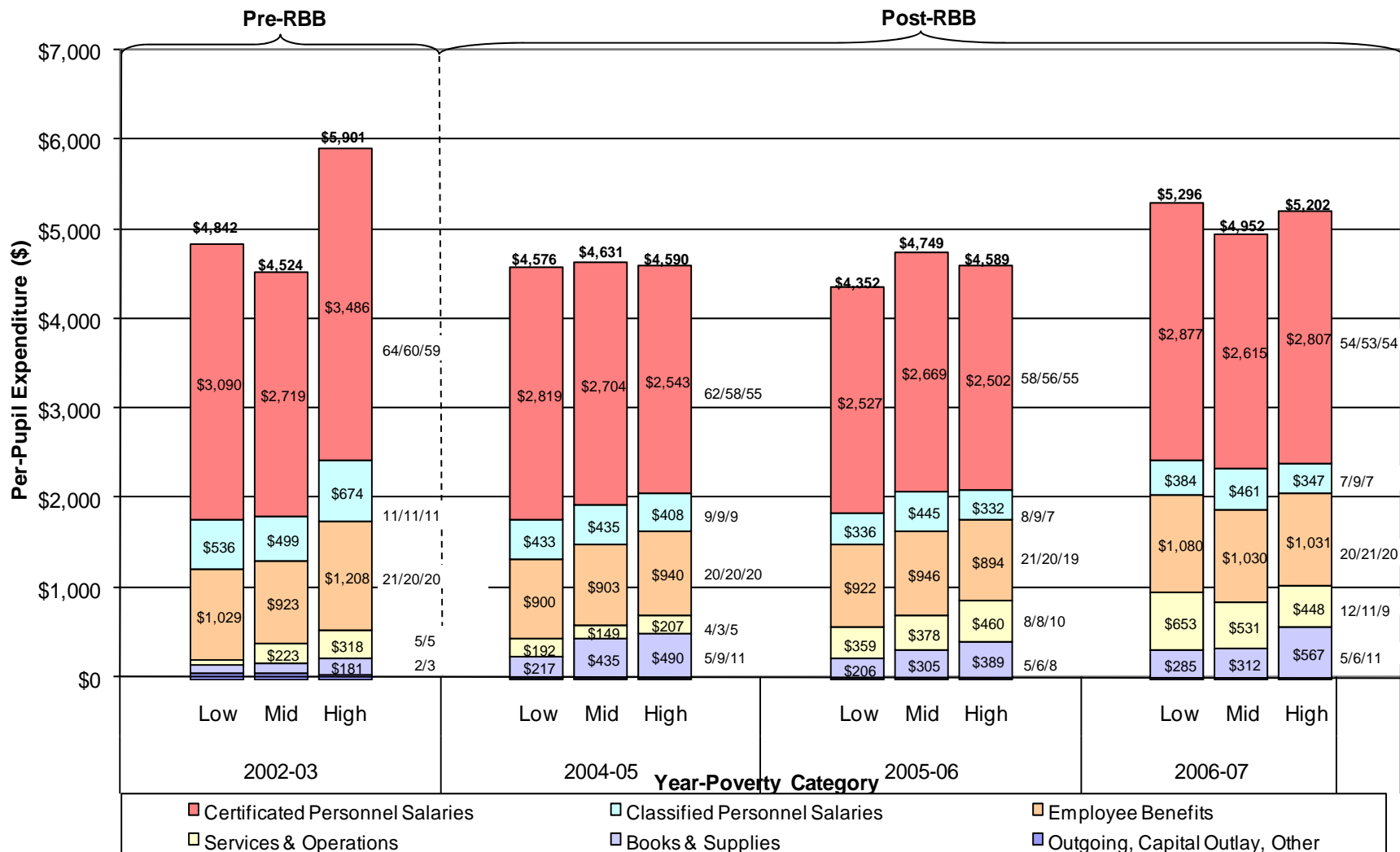
**The Employment Cost Index was derived from [ftp://ftp.bls.gov/pub/suppo/eci.echistrynaics.txt](http://ftp.bls.gov/pub/suppo/eci.echistrynaics.txt)

Exhibit A35: Distribution of Oakland Middle School Per-Pupil Expenditure Across Spending Object by Poverty Category for 2002-03 and 2004-05 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 to 2006-07.
 Note: Labels for dollar values below \$125 and corresponding expenditure shares not displayed.

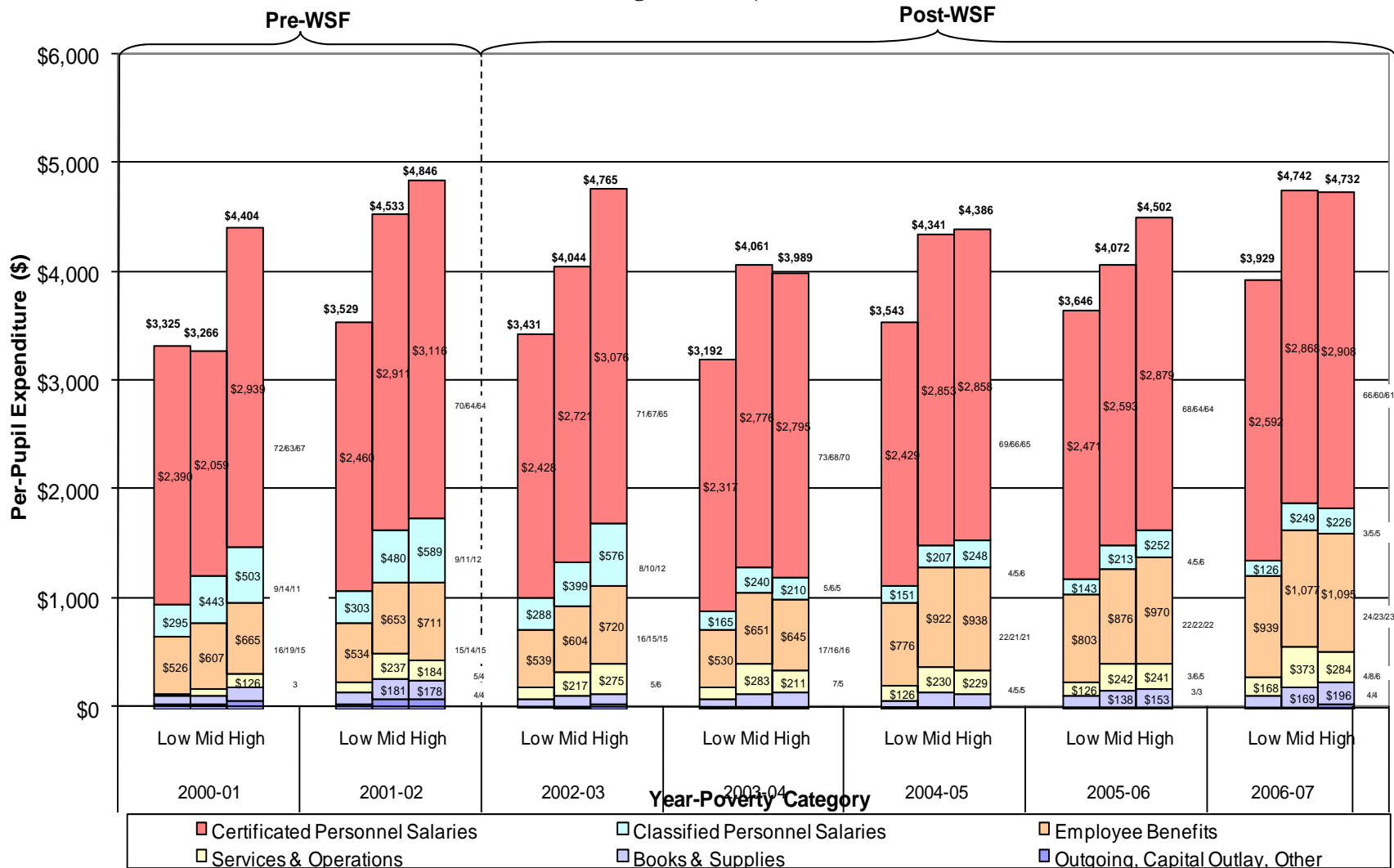
Exhibit A36: Distribution of Oakland High School Per-Pupil Expenditure Across Spending Object by Poverty Category for 2002-03 and 2004-05 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 to 2006-07.

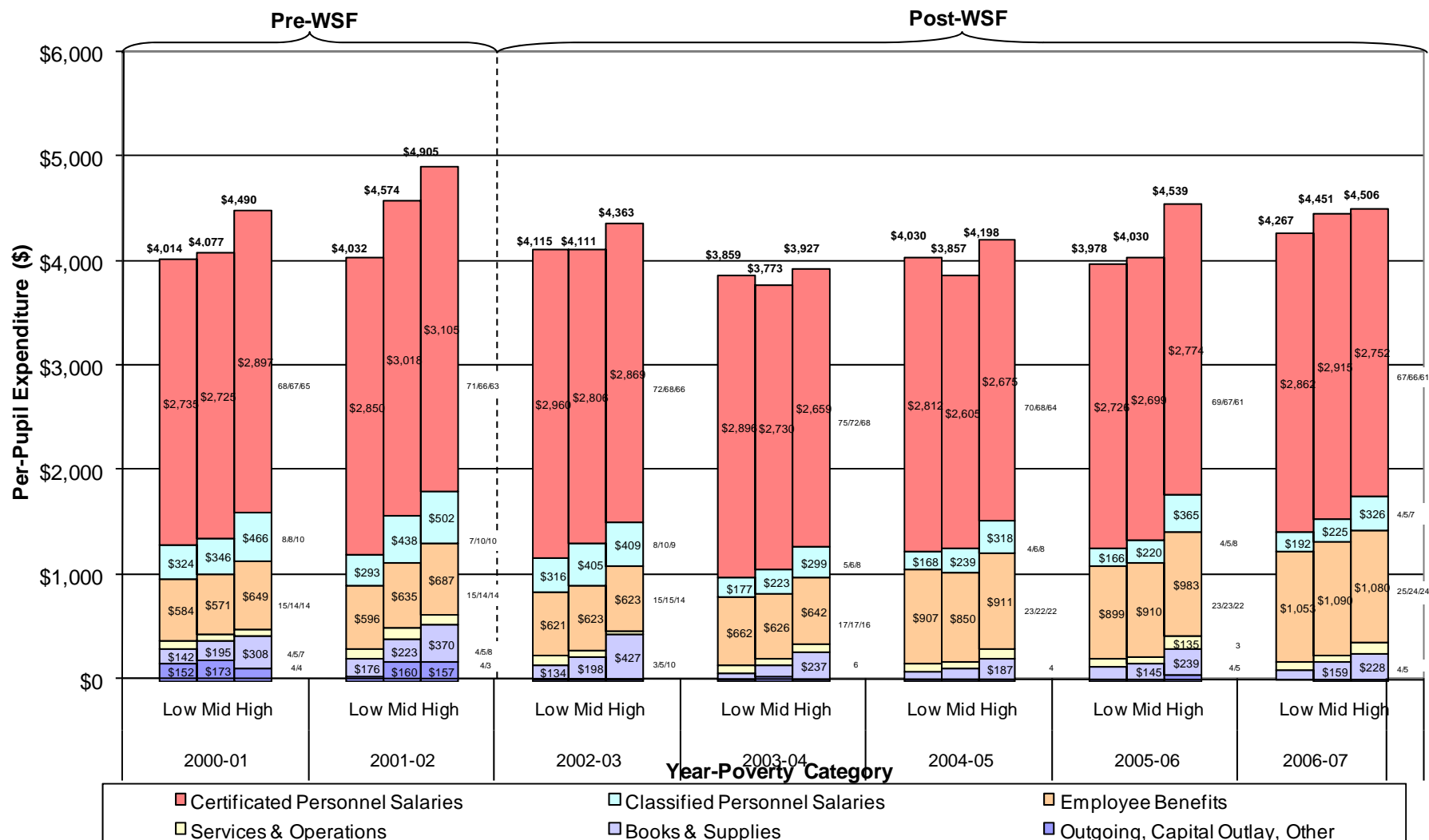
Note: Labels for dollar values below \$125 and corresponding expenditure shares not displayed.

Exhibit A37: Distribution of San Francisco Middle School Per-Pupil Expenditure Across Spending Object by Poverty Category for 2000-01 to 2006-07 (Total Per-Pupil Expenditure in Bold, Shares to the Right of Bars)



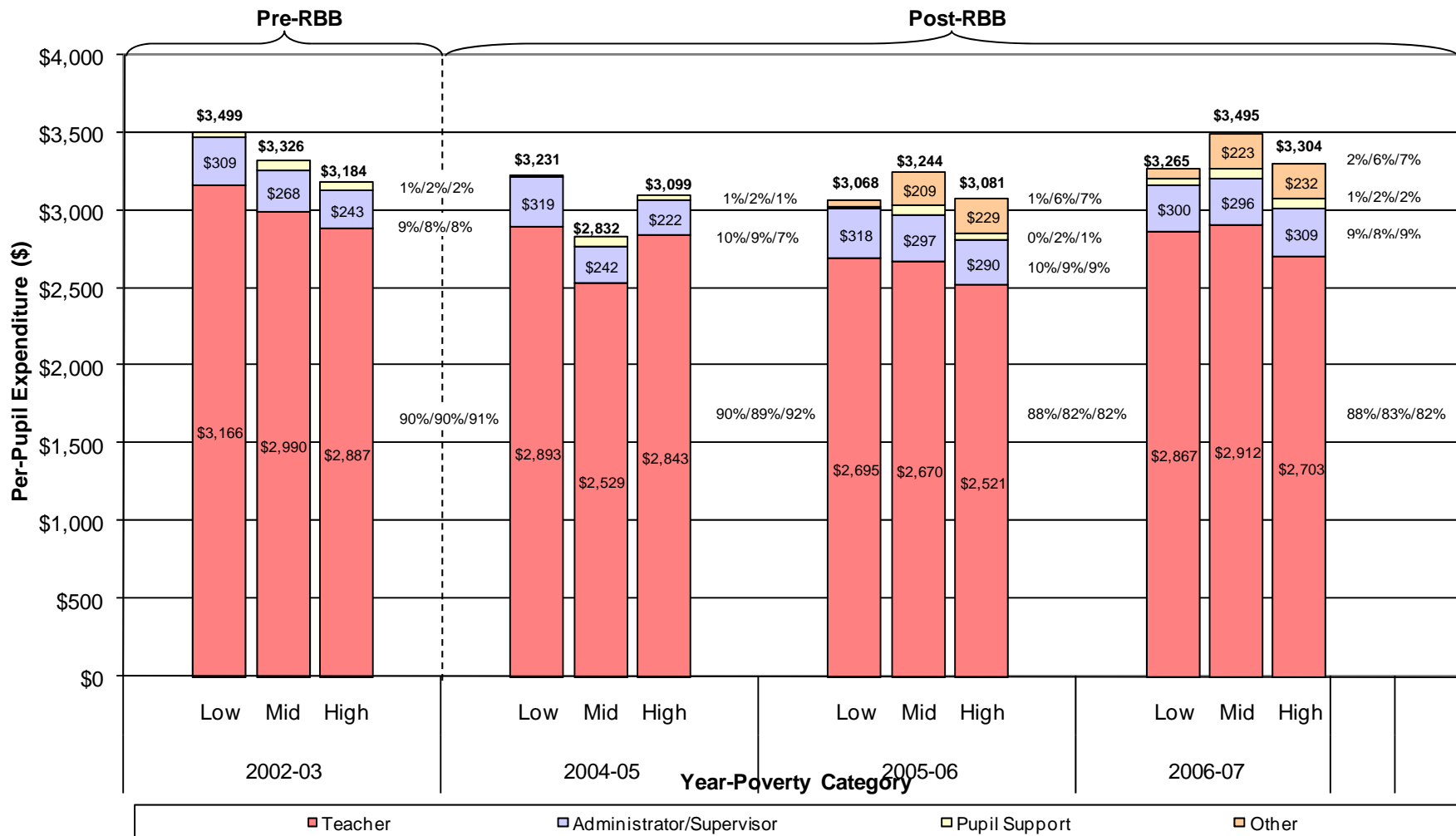
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 to 2006-07.
 Note: Labels for dollar values below \$125 and corresponding expenditure shares not displayed.

Exhibit A38: Distribution of San Francisco High School Per-Pupil Expenditure Across Spending Object by Poverty Category for 2000-01 to 2006-07 (Total Per-Pupil Expenditure in Bold, Shares to Right of Bars)



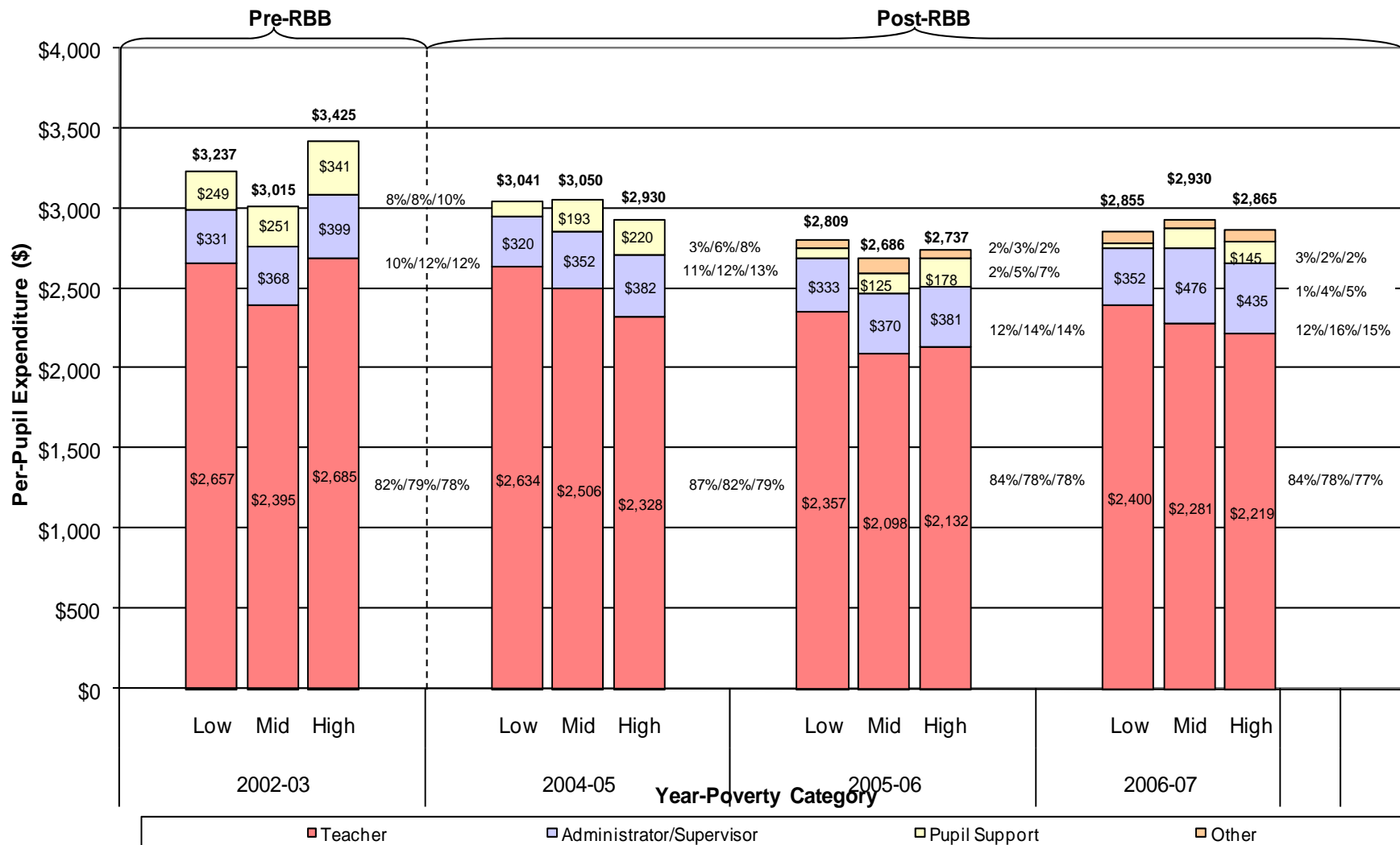
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 to 2006-07.
 Note: Labels for dollar values below \$125 and corresponding expenditure shares not displayed.

Exhibit A39: Distribution of Oakland Elementary School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2002-03 and 2004-05 to 2006-07



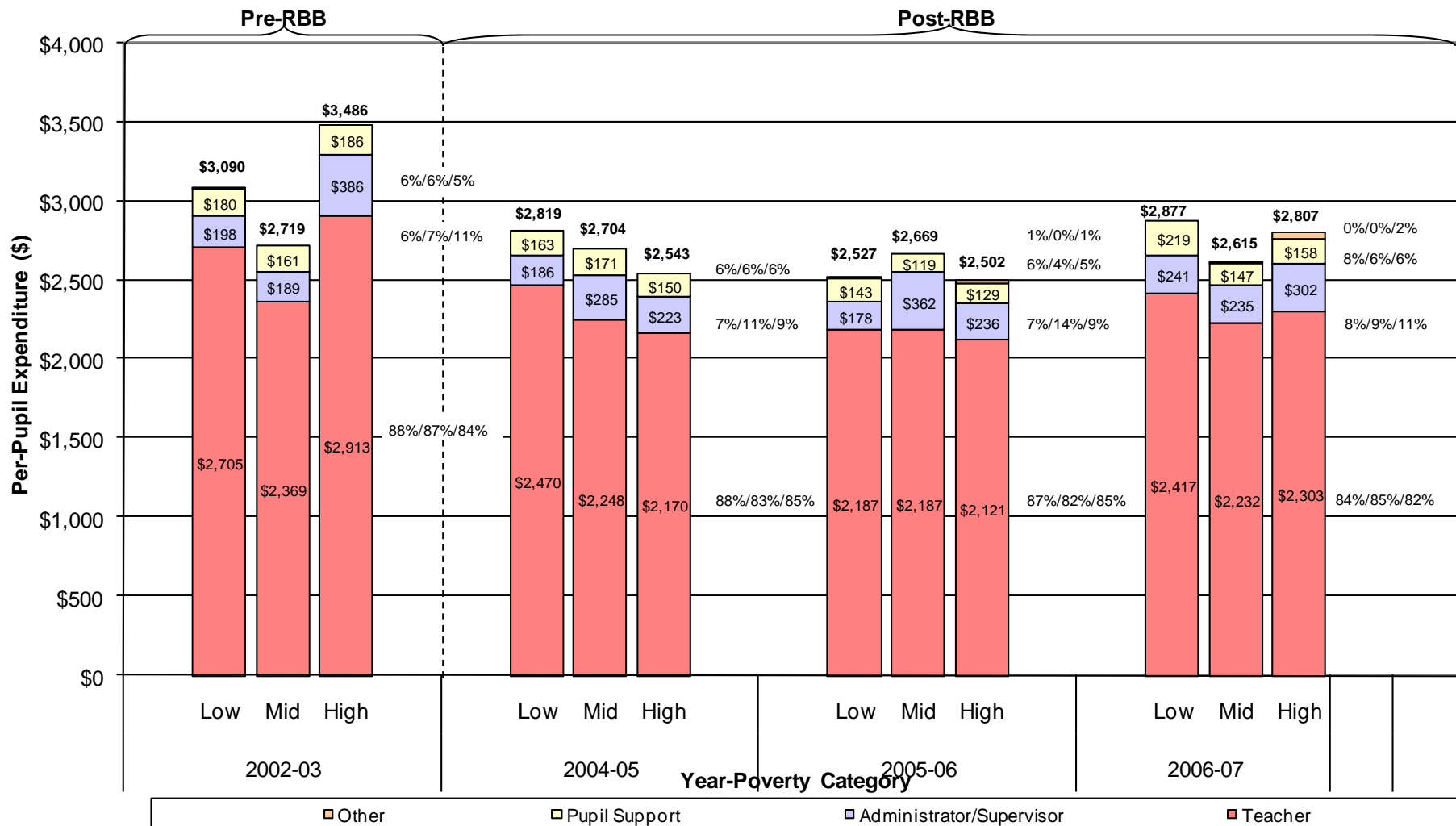
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 to 2006-07.
 Note: Labels for dollar values below \$125 not displayed.

Exhibit A40: Distribution of Oakland Middle School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2002-03 and 2004-05 to 2006-07



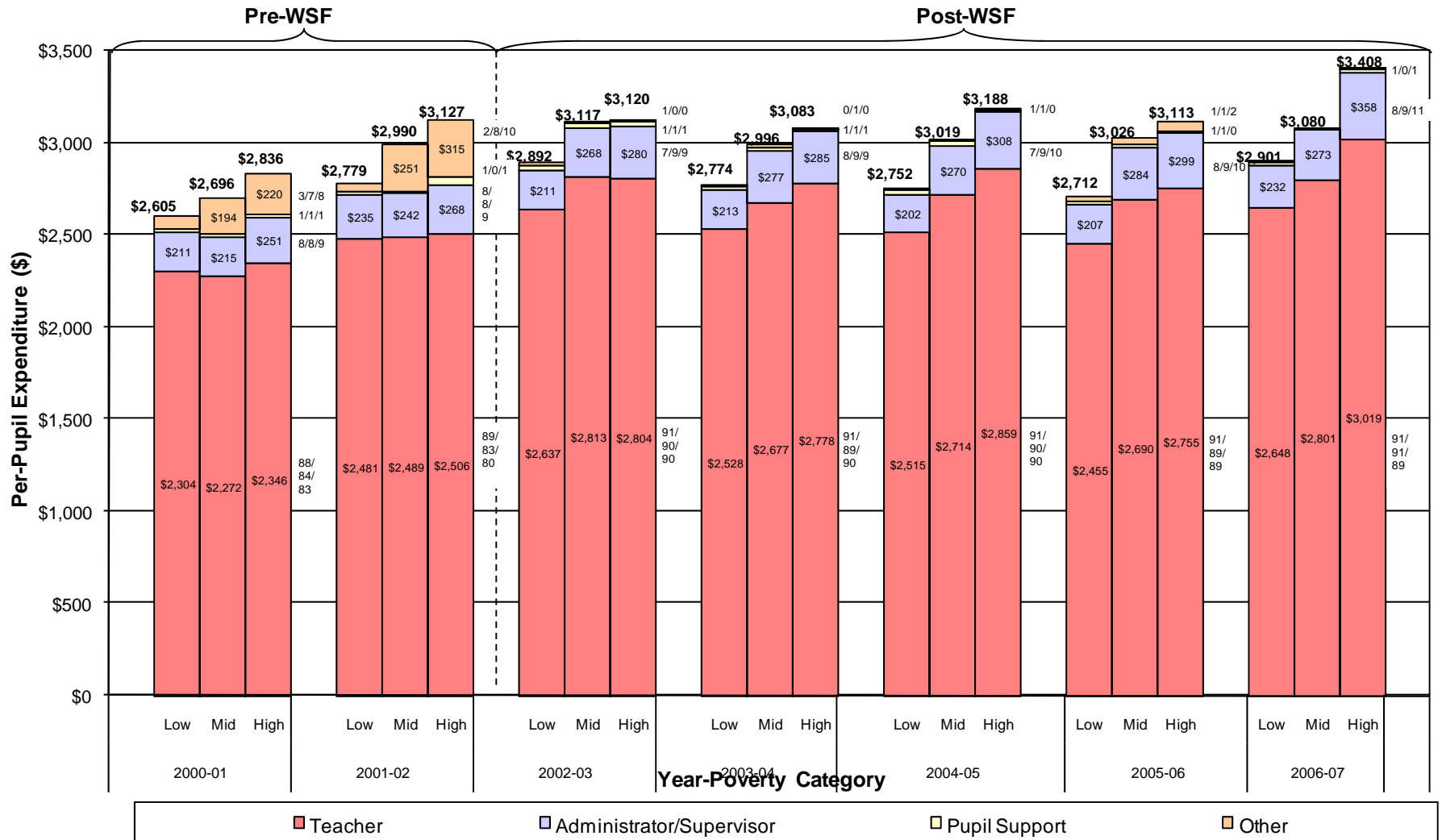
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 to 2006-07.
 Note: Labels for dollar values below \$125 not displayed.

Exhibit A41: Distribution of Oakland High School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2002-03 and 2004-05 to 2006-07



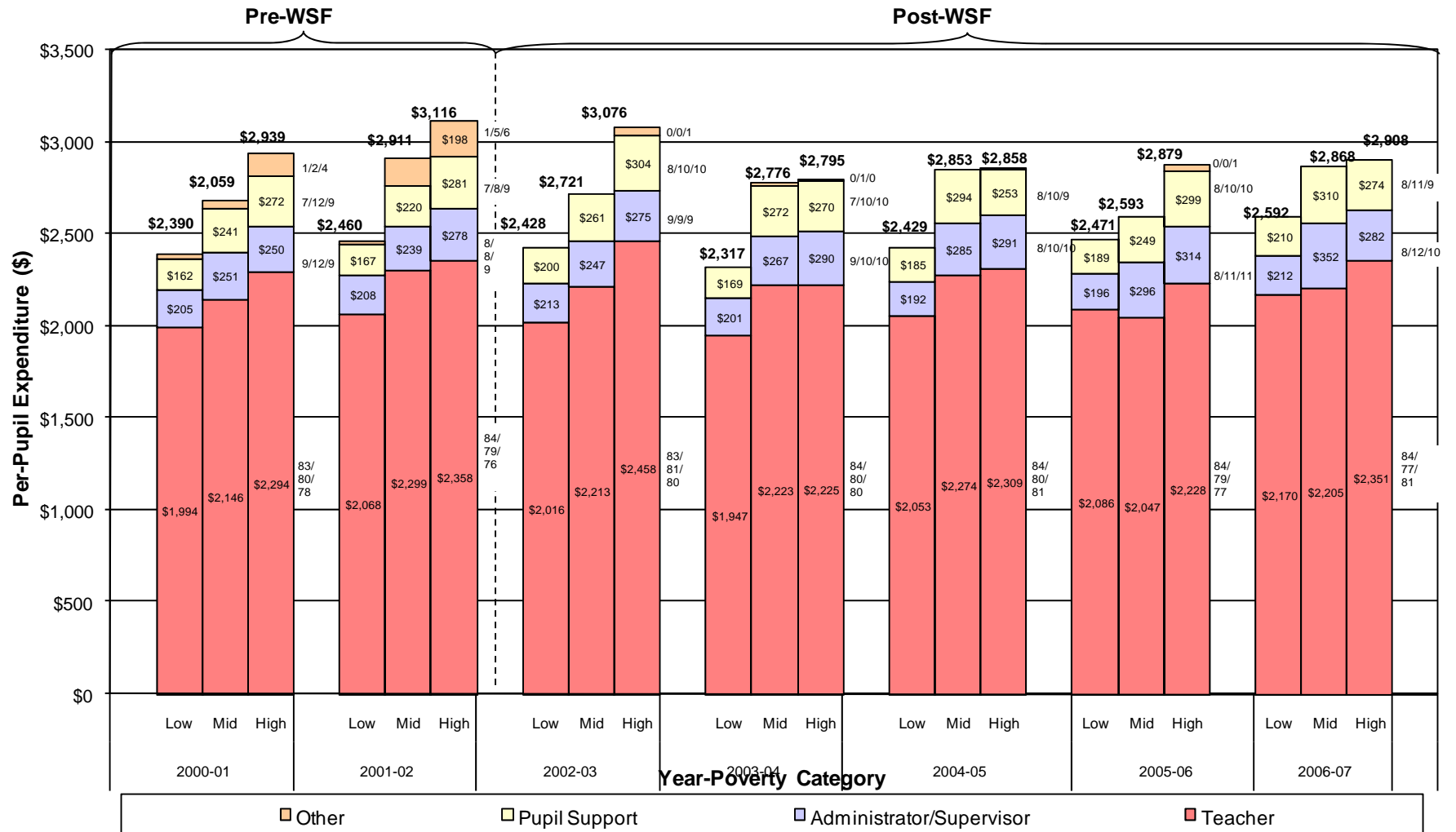
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 to 2006-07.
 Note: Labels for dollar values below \$125 not displayed.

Exhibit A42: Distribution of San Francisco Elementary School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2000-01 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 to 2006-07.
 Note: Labels for dollar values below \$125 not displayed.

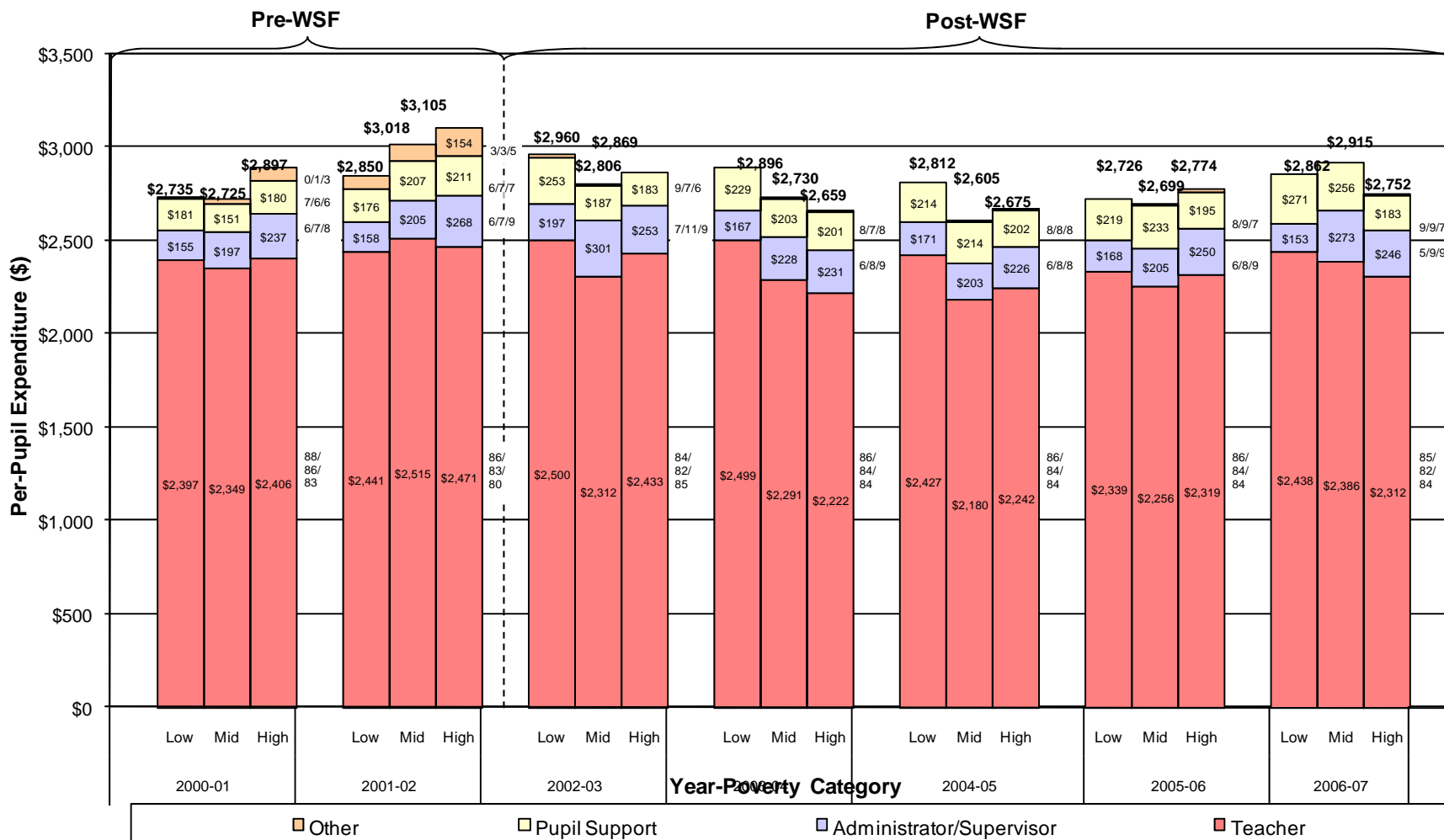
Exhibit A43: Distribution of San Francisco Middle School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2000-01 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 to 2006-07.

Note: Labels for dollar values below \$125 not displayed.

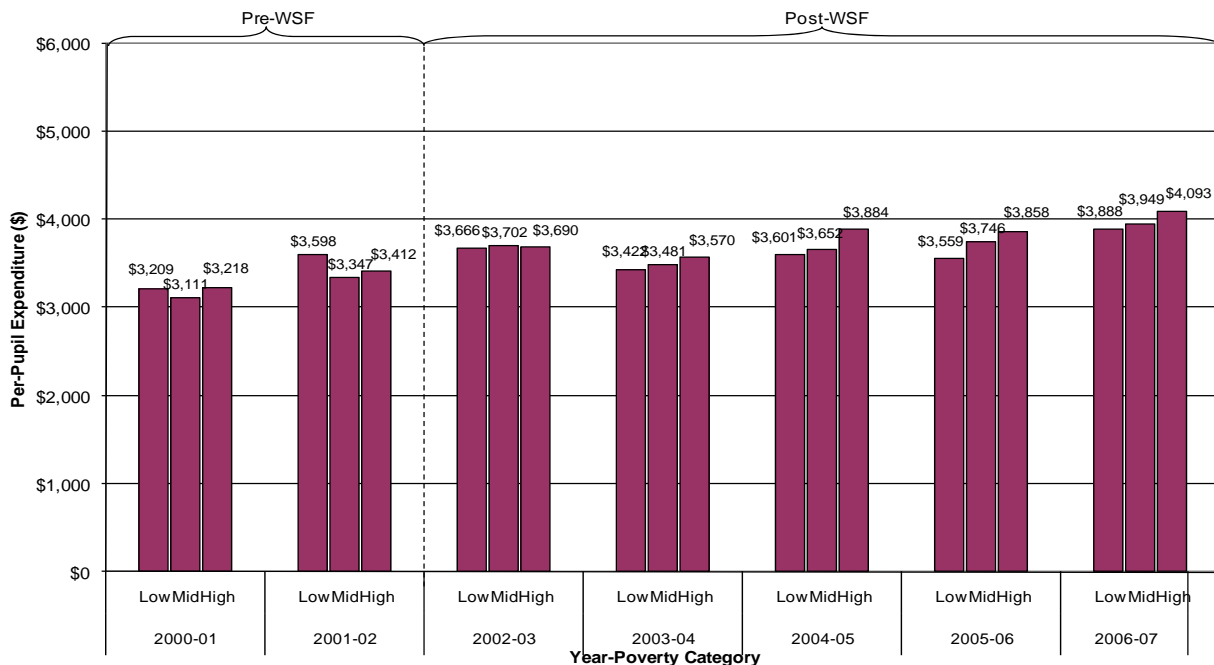
Exhibit A44: Distribution of San Francisco High School Per-Pupil Certified Salary Expenditure Across Spending Object by Poverty Category for 2000-01 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 to 2006-07.
 Note: Labels for dollar values below \$125 not displayed.

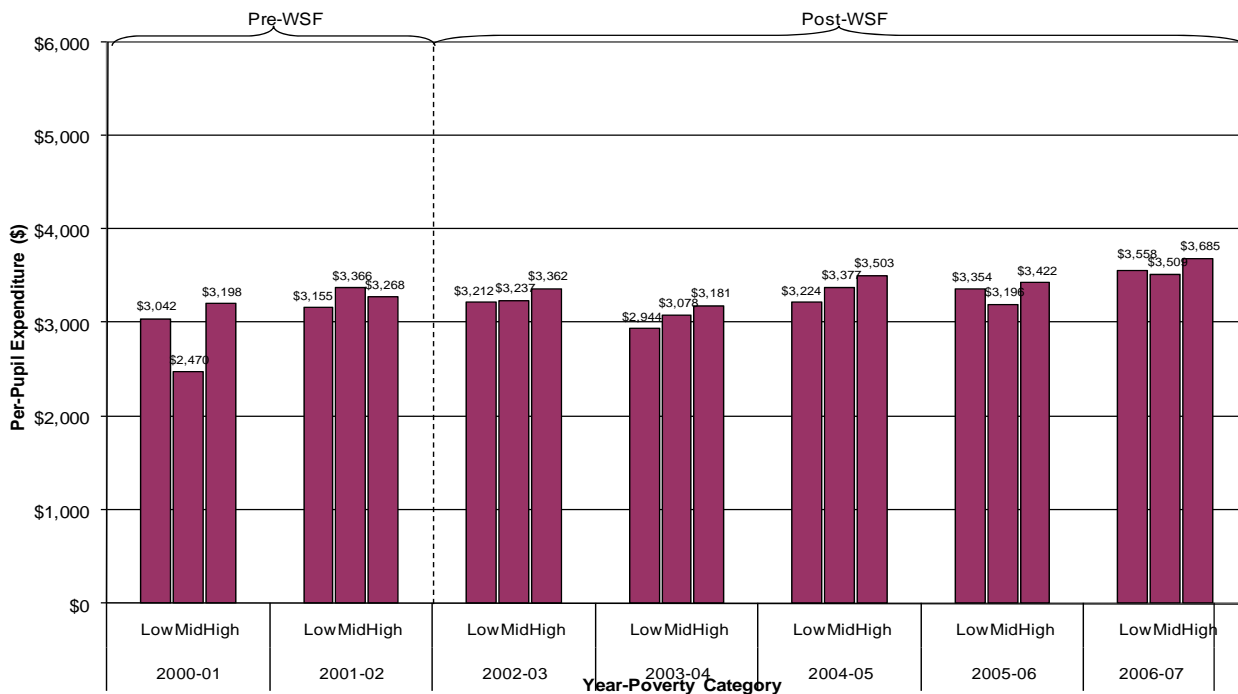
Resource Distributions (Restricted vs. Unrestricted)

Exhibit A45: Distribution of San Francisco Elementary School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



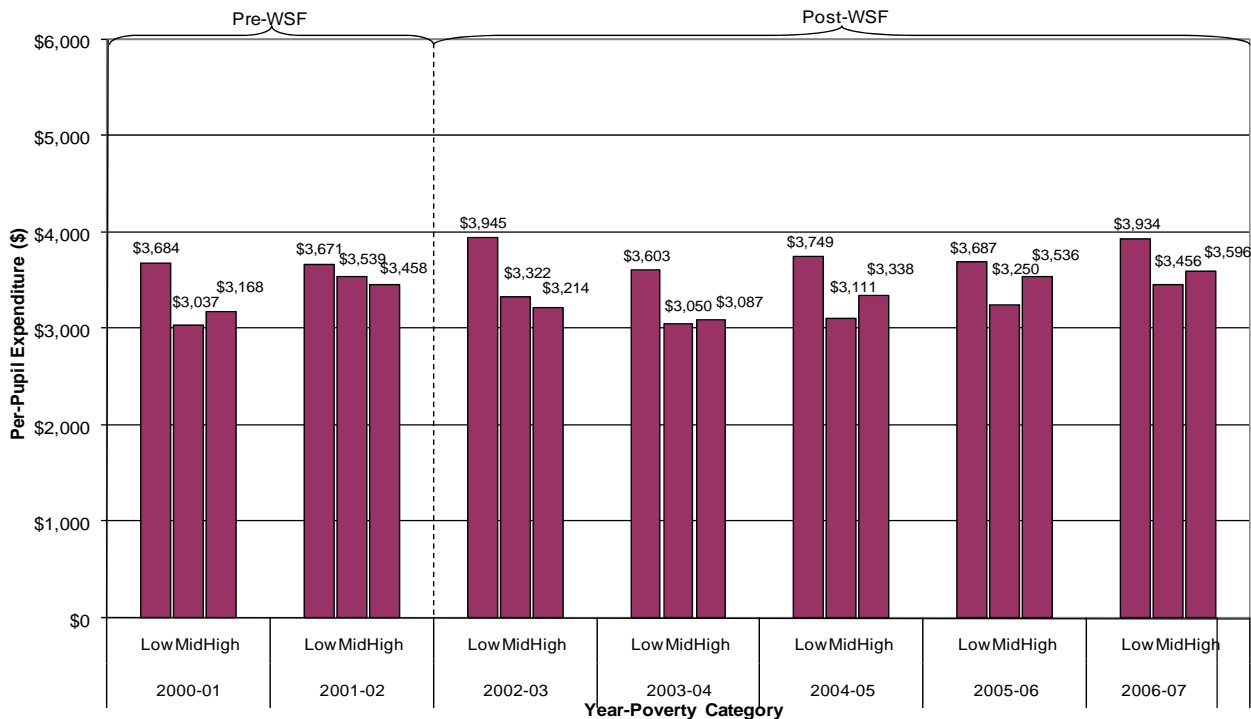
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A46: Distribution of San Francisco Middle School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



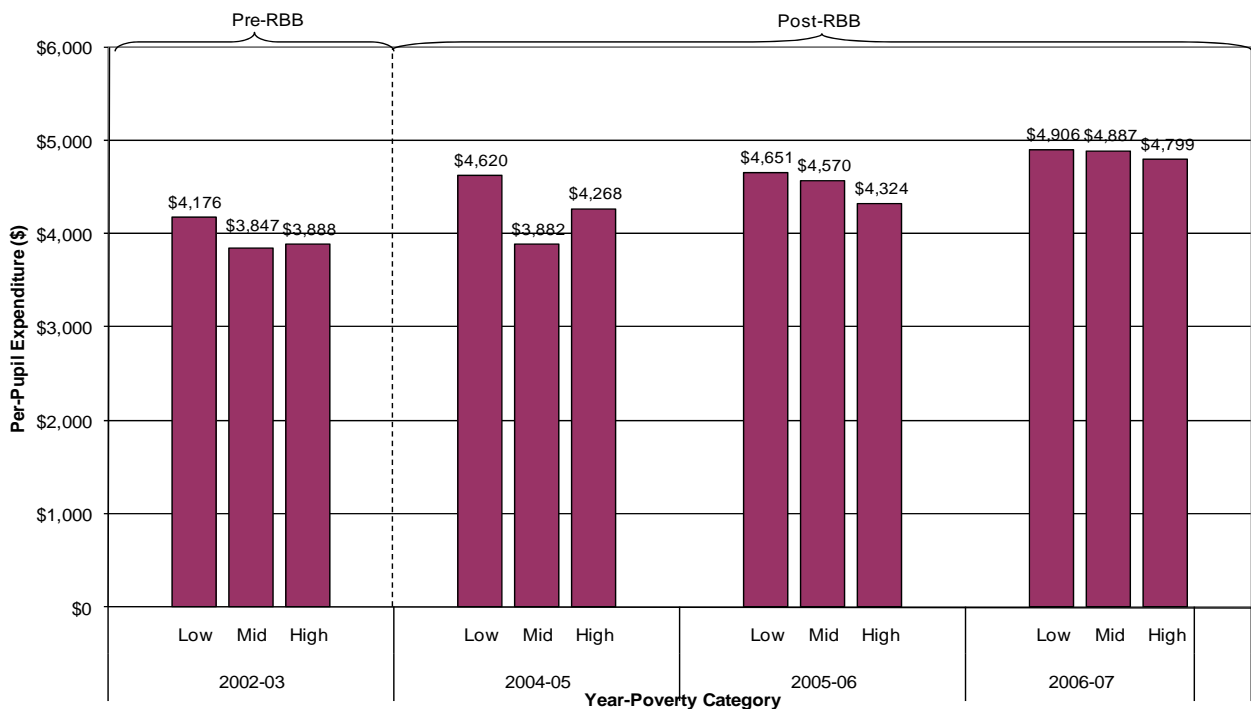
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A47: Distribution of San Francisco High School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



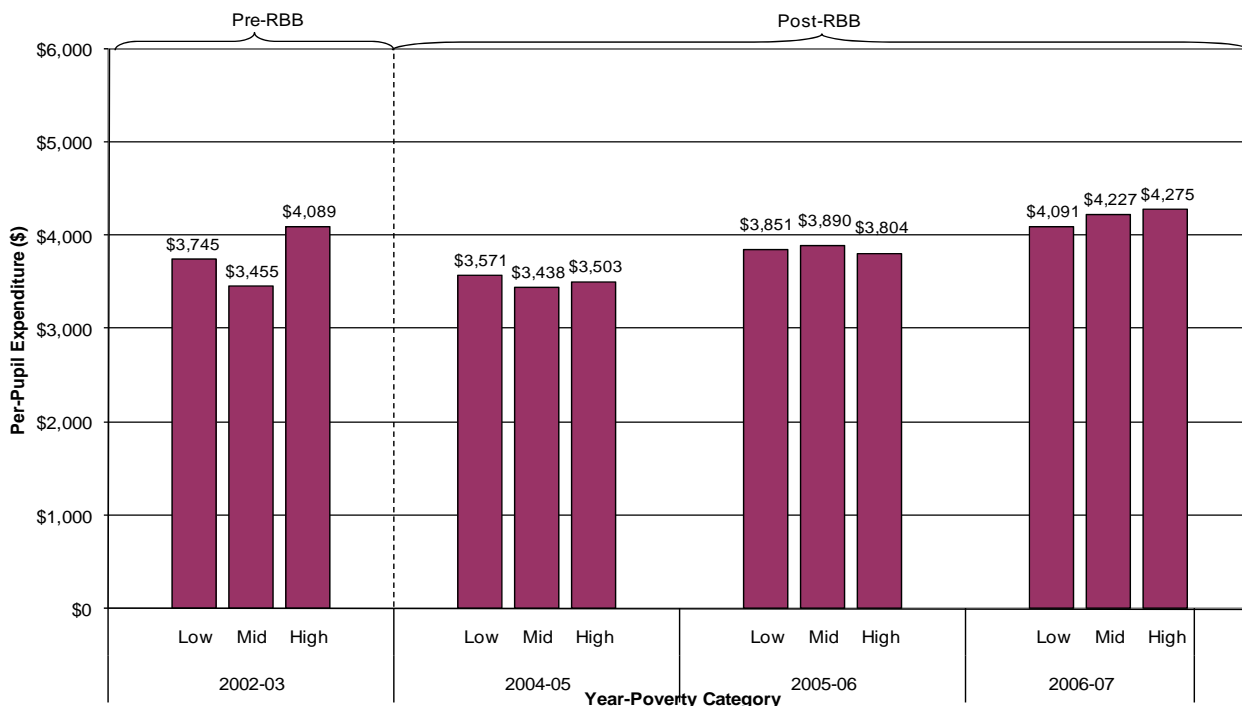
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A48: Distribution of Oakland Elementary School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



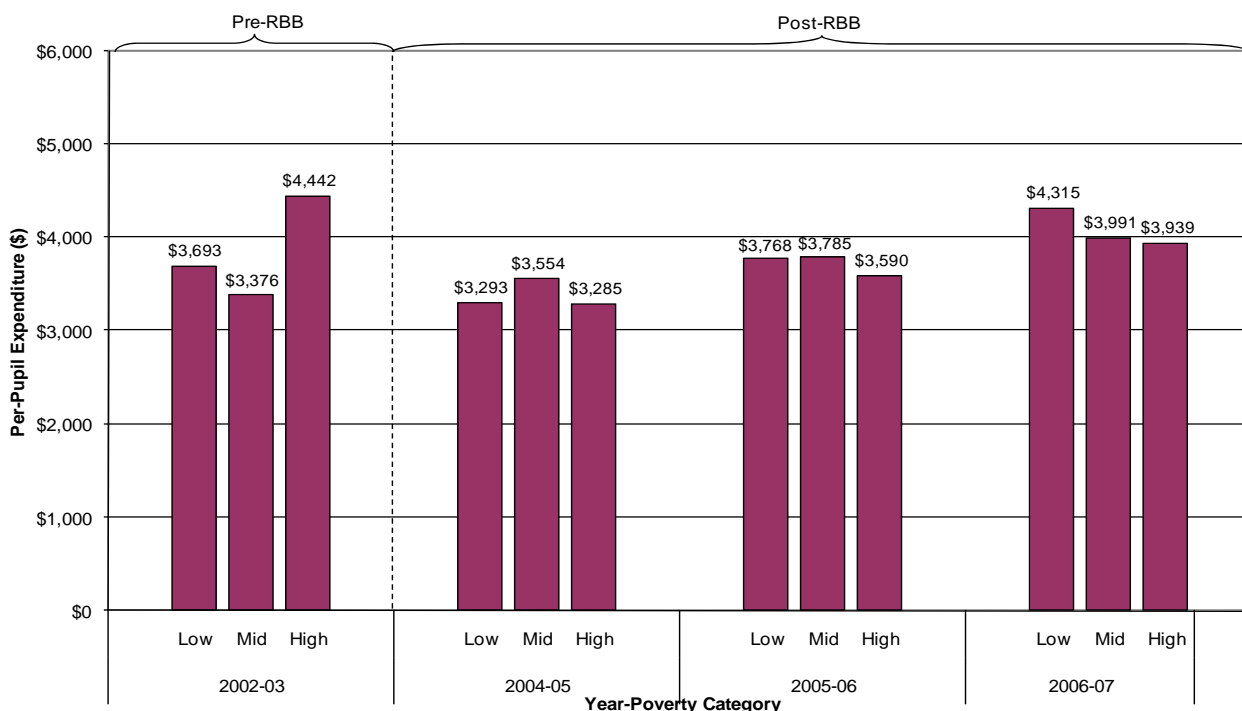
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Exhibit A49: Distribution of Oakland Middle School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



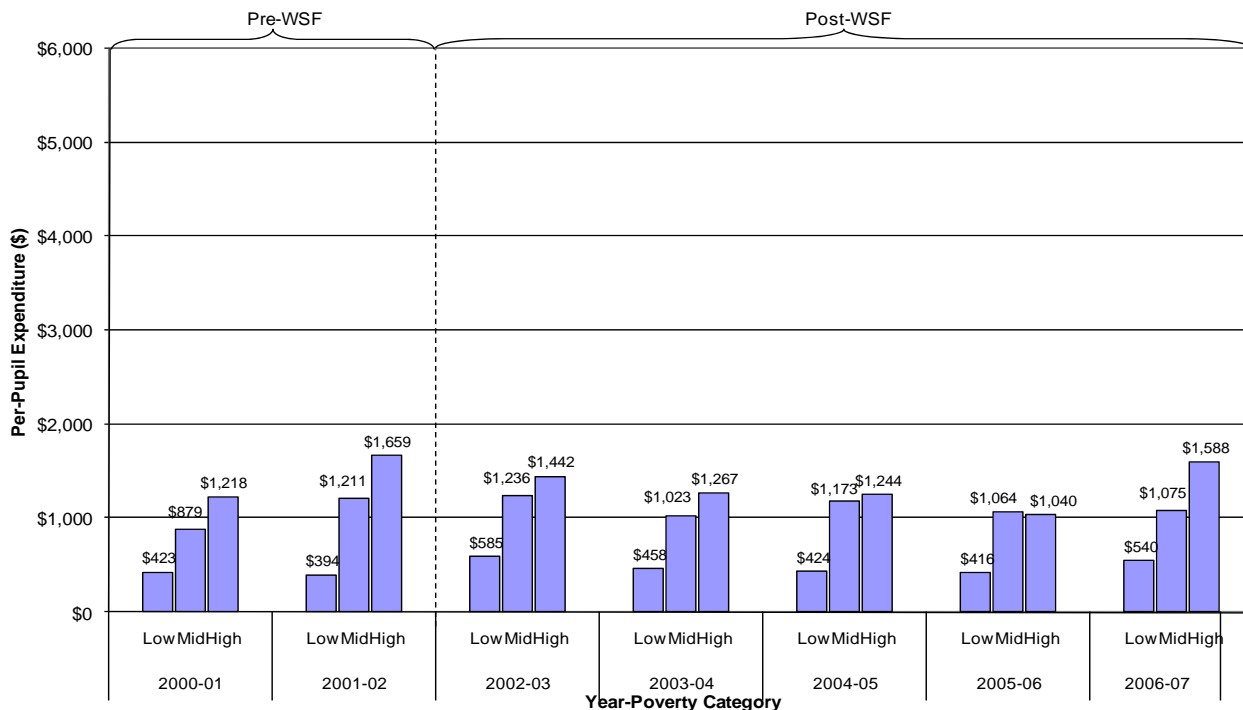
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Exhibit A50: Distribution of Oakland High School Per-Pupil Unrestricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



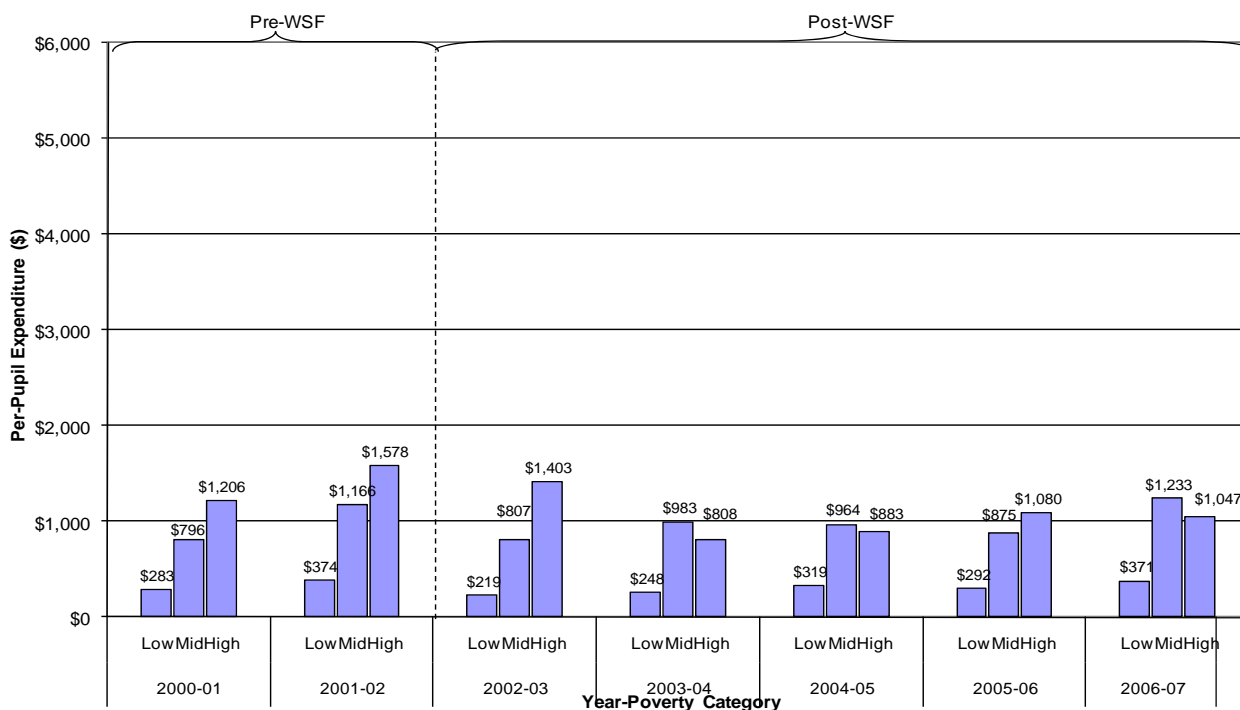
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Exhibit A51: Distribution of San Francisco Elementary School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



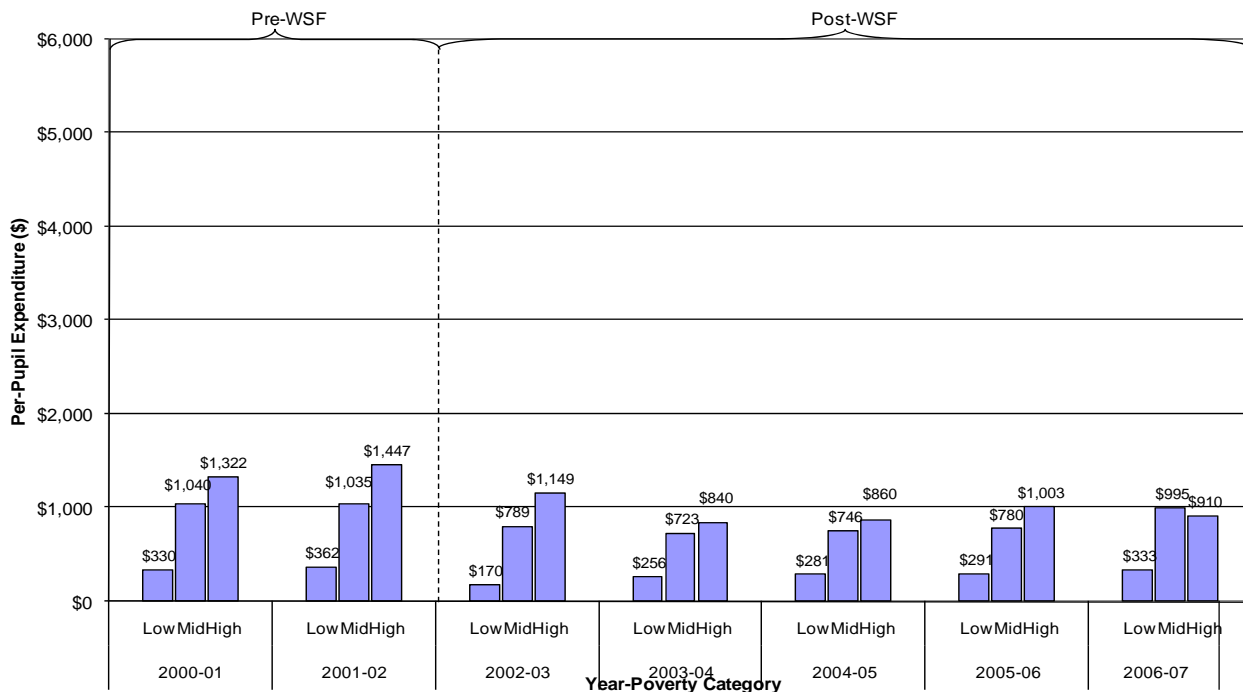
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A52: Distribution of San Francisco Middle School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



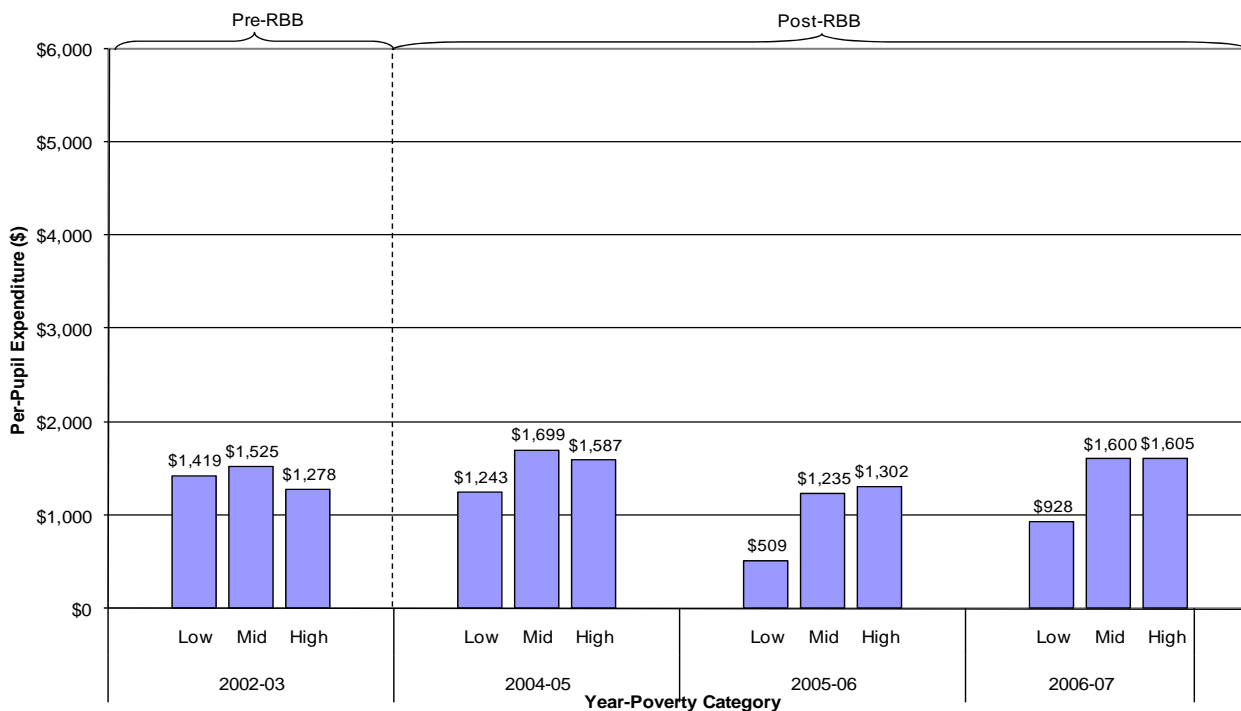
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A53: Distribution of San Francisco High School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2000-01 to 2006-07



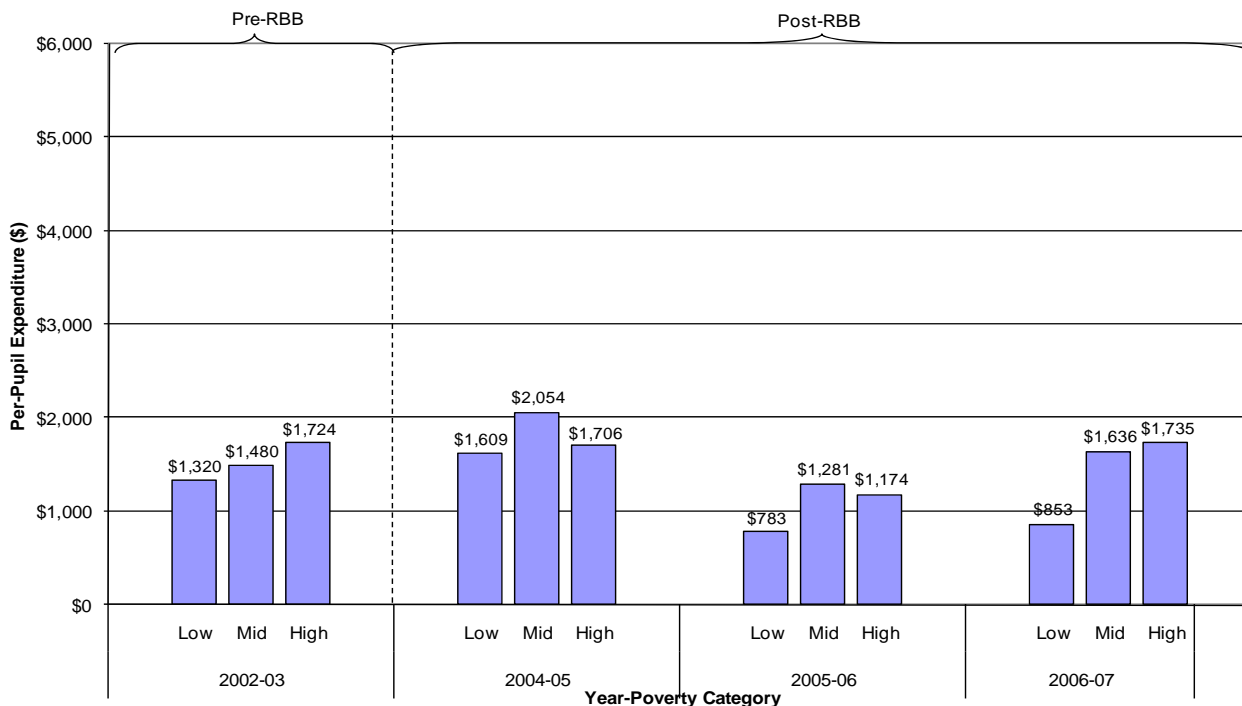
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2000-01 through 2006-07.

Exhibit A54: Distribution of Oakland Elementary School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



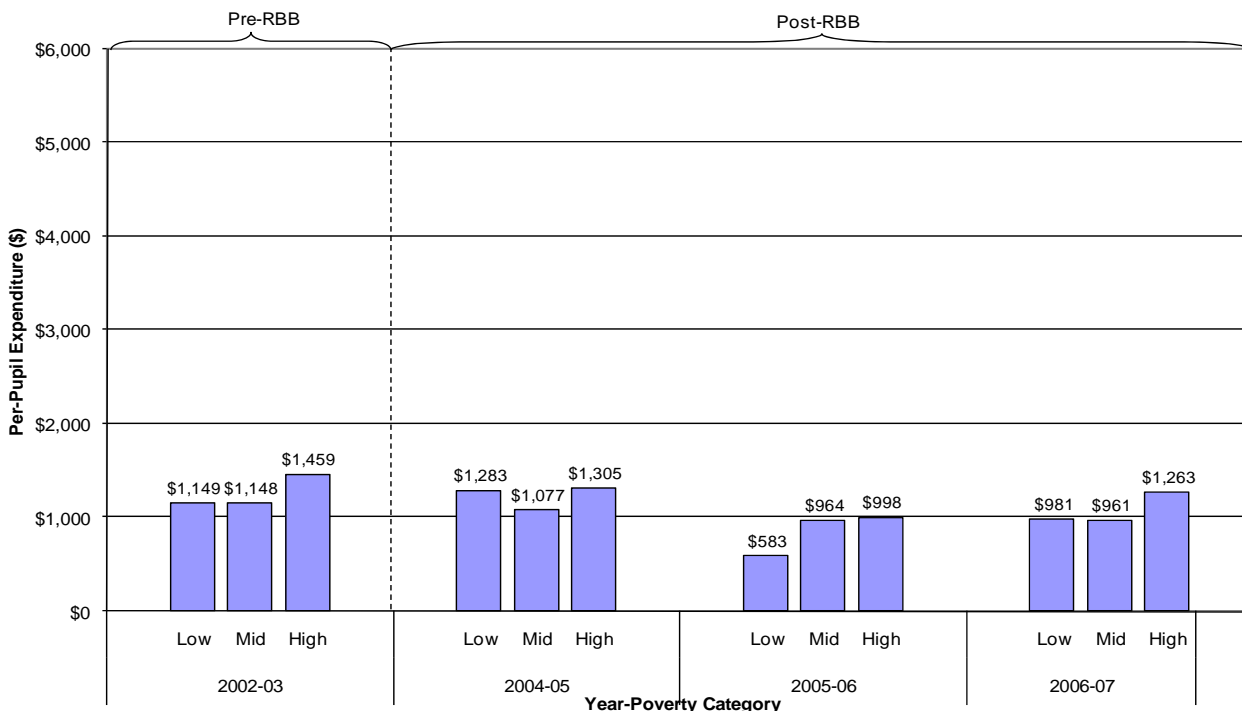
Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Exhibit A55: Distribution of Oakland Middle School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Exhibit A56: Distribution of Oakland High School Per-Pupil Restricted Expenditure across Resource Types by Poverty Category from 2002-03 and 2004-05 to 2006-07



Source: District-provided Standardized Account Code Structure (SACS) fiscal data, 2002-03 and 2004-05 through 2006-07.

Regression Output

Each table is specific to a given schooling level and the type of expenditure being examined (i.e., unrestricted, restricted, or total).

Exhibit A57: Output for Oakland Implicit Weight Regression Estimation (*, ** and * Denote Significance at the 1-, 5- and 10-Percent Levels, Respectively)**

Elementary Schools - Total (Unrestricted and Restricted) Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.111	0.0395	0.3404***	0.4493***
Enrollment/100	-0.0981*	-0.1832**	-0.0750**	-0.1273***
Enrollment/100 Squared	0.0062	0.0138*	0.0053	0.0102***
Constant	8.8285***	9.1049***	8.6578***	8.8283***
Number of Observations	55	52	54	58
Adjusted R2	0.2231	0.2074	0.3438	0.5828
Elementary Schools - Total (Unrestricted and Restricted) Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.111	0.1321	0.3644***	0.4660***
Enrollment/100	-0.0981*	-0.2295***	-0.0843**	-0.1270***
Enrollment/100 Squared	0.0062	0.0185**	0.0062	0.0101***
Constant	8.8285***	9.0789***	8.6496***	8.8140***
Number of Observations	55	52	54	58
Adjusted R2	0.2231	0.2759	0.3705	0.5944
Middle/High Schools - Total (Unrestricted and Restricted) Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.3774*	0.0235	0.1986	0.1622
Enrollment/100	-0.0111	-0.0305**	-0.0791***	-0.0529***
Enrollment/100 Squared	0.0001	0.0013*	0.0032***	0.0018***
Constant	0.0519	-0.2153***	-0.1522***	-0.0496
Number of Observations	23	33	34	38
Adjusted R2	0.1818	0.4915	0.6063	0.5163
Middle/High Schools - Total (Unrestricted and Restricted) Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.3774*	0.0161	0.2044	0.1866
Enrollment/100	-0.0111	-0.0259*	-0.0779***	-0.0515***
Enrollment/100 Squared	0.0001	0.0011*	0.0031***	0.0017***
Constant	0.0519	-0.1930***	-0.1478***	-0.0455
Number of Observations	23	33	34	38
Adjusted R2	0.1818	0.448	0.5995	0.5231

Exhibit A57 (Continued): Output for Oakland Implicit Weight Regression Estimation (*, ** and * Denote Significance at the 1-, 5- and 10-Percent Levels, Respectively)**

Elementary Schools - Unrestricted Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
In(1+Free/Reduced Lunch)	-0.0127	-0.3854**	-0.1144*	0.0147
Enrollment/100	-0.0823***	-0.2736**	-0.0805	-0.1138***
Enrollment/100 Squared	0.0049**	0.0225*	0.0057	0.0109***
Constant	8.5484***	9.1743***	8.6910***	8.7345***
Number of Observations	55	52	54	58
Adjusted R2	0.3871	0.2091	0.2657	0.2548
Elementary Schools - Unrestricted Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
In(1+Free/Reduced Lunch)	-0.0127	-0.3092*	-0.0948	0.0319
Enrollment/100	-0.0823***	-0.3500***	-0.0925	-0.1136***
Enrollment/100 Squared	0.0049**	0.0301***	0.0068	0.0108***
Constant	8.5484***	9.1897***	8.6875***	8.7185***
Number of Observations	55	52	54	58
Adjusted R2	0.3871	0.2659	0.2869	0.2647
Middle/High Schools - Unrestricted Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
In(1+Free/Reduced Lunch)	-0.0678	-0.1891	-0.2518**	-0.2978*
Enrollment/100	-0.0298**	-0.0257**	-0.0568***	-0.0271**
Enrollment/100 Squared	0.0007	0.0008*	0.0023***	0.0008
Constant	0.0974*	-0.0674**	-0.1132***	-0.0212
Number of Observations	23	33	34	38
Adjusted R2	0.379	0.2661	0.5851	0.2133
Middle/High Schools - Unrestricted Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
In(1+Free/Reduced Lunch)	-0.0678	-0.1986*	-0.2444**	-0.2662*
Enrollment/100	-0.0298**	-0.0188**	-0.0548***	-0.0249*
Enrollment/100 Squared	0.0007	0.0006	0.0022***	0.0008
Constant	0.0974*	-0.0339	-0.1068***	-0.0148
Number of Observations	23	33	34	38
Adjusted R2	0.379	0.2317	0.5523	0.1841

**Exhibit A57 (continued): Output for Oakland Implicit Weight Regression Estimation
(***, ** and * Denote Significance at the 1-, 5- and 10-Percent Levels, Respectively)**

Elementary Schools - Restricted Funding				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.4962	1.2967***	3.5222***	2.6170***
Enrollment/100	-0.1587	0.0352	0.029	-0.2056*
Enrollment/100 Squared	0.0119	-0.0061	-0.0047	0.0106
Constant	7.3676***	6.6357***	5.0212***	6.4309***
Number of Observations	54	52	54	58
Adjusted R2	0.008	0.2154	0.6061	0.7806
Middle/High Schools – Restricted Funding				
	2002-03	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	2.1558***	0.4644	2.8394***	2.2587***
Enrollment/100	0.0644	-0.0449	-0.1306**	-0.1149***
Enrollment/100 Squared	-0.002	0.0026	0.0053**	0.0038**
Constant	-0.1297	-0.6016***	-0.144	-0.0174
Number of Observations	23	33	34	38
Adjusted R2	0.456	0.5217	0.5425	0.6478

Exhibit A58: Output for San Francisco Implicit Weight Regression Estimation (*, ** and * Denote Significance at the 1-, 5- and 10-Percent Levels, Respectively)**

Elementary Schools - Total (Unrestricted and Restricted) Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.4929***	0.5518***	0.4743***	0.4521***	0.5599***	0.4864***	0.4840***
Enrollment/100	-0.2897***	-0.2143***	-0.1728***	-0.1650***	-0.2248***	-0.1750***	-0.2710***
Enrollment/100 Squared	0.0305***	0.0211***	0.0147**	0.0136***	0.0213**	0.0150**	0.0265***
Constant	8.7204***	8.6841***	8.7173***	8.6150***	8.7029***	8.6343***	8.8936***
Number of Observations	70	70	70	70	70	70	71
Adjusted R2	0.5074	0.6337	0.487	0.563	0.6413	0.5549	0.6663

Middle/High Schools - Total (Unrestricted and Restricted) Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	0.053	0.0441	0.1949	0.3033	0.4833***	0.9756***	0.8980***
Enrollment/100	-0.0861*	-0.0487***	-0.0592***	-0.0520***	-0.0297**	-0.0309	-0.0562***
Enrollment/100 Squared	0.0024*	0.0012*	0.0016***	0.0015***	0.0008*	0.0009	0.0017***
High School Indicator	0.2191*	0.1083	0.0832	0.0562	0.056	0.1281**	0.0921
Constant	8.7010***	8.7026***	8.6267***	8.4388***	8.2955***	8.0420***	8.2950***
Number of Observations	25	25	25	27	27	27	27
Adjusted R2	0.2374	0.3416	0.4403	0.4789	0.3969	0.3919	0.5187

Elementary Schools - Unrestricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	-0.1101	-0.0549	-0.0791	0.0313	0.1169	0.1472*	0.0542
Enrollment/100	-0.4049***	-0.3859***	-0.2993***	-0.2191***	-0.2599**	-0.1622***	-0.1827**
Enrollment/100 Squared	0.0429***	0.0415***	0.0302***	0.0223***	0.0279**	0.0157***	0.0190**
Constant	8.9692***	8.9676***	8.9044***	8.6173***	8.6938***	8.5171***	8.6467***
Number of Observations	70	70	70	70	70	70	71
Adjusted R2	0.4848	0.4792	0.5761	0.4414	0.3774	0.4278	0.3406

Middle/High Schools - Unrestricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	-0.4218	-0.4863**	-0.4676**	-0.042	0.0378	0.6704	0.7932
Enrollment/100	-0.1416***	-0.0806***	-0.0785***	-0.0255**	-0.0408***	-0.0327**	-0.0396*
Enrollment/100 Squared	0.0044**	0.0025***	0.0024***	0.0009**	0.0014***	0.0012**	0.0015**
High School Indicator	0.164	0.086	0.0732*	0.038	0.0118	0.0838	0.0688
Constant	8.9065***	8.7405***	8.7560***	8.1833***	8.3259***	7.9522***	7.9851***
Number of Observations	25	25	25	27	27	27	27
Adjusted R2	0.3072	0.4252	0.5267	0.2224	0.3302	0.3193	0.2813

Exhibit A58 (continued): Output for San Francisco Implicit Weight Regression Estimation
 (**, ** and * Denote Significance at the 1-, 5- and 10-Percent Levels, Respectively)

Elementary Schools - Restricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	3.5274***	3.0339***	2.9169***	2.4690***	3.0014***	2.5405***	2.5216***
Enrollment/100	0.241	0.4790**	0.3677	0.2473	0.0334	-0.0747	-0.3810*
Enrollment/100 Squared	-0.0315	-0.0649**	-0.0541*	-0.0495	-0.0175	-0.0054	0.028
Constant	4.6802***	4.8299***	5.1523***	5.4999***	5.5137***	5.8284***	6.6173***
Number of Observations	70	70	70	70	70	70	71
Adjusted R2	0.4365	0.481	0.3875	0.464	0.513	0.3499	0.5168
Middle/High Schools - Restricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
ln(1+Free/Reduced Lunch)	2.9707**	2.7382**	4.4798***	2.669	3.2115*	3.0897	1.6846
Enrollment/100	0.1338	0.0974	0.1059	-0.1064	0.0345	0.0194	-0.099
Enrollment/100 Squared	-0.005	-0.0045	-0.0045	0.0022	-0.0025	-0.0022	0.0016
High School Indicator	0.2398	0.1049	0.1619	0.1684	0.3017	0.3927	0.2093
Constant	4.8372***	5.5166***	4.2054***	6.0410***	5.0002***	5.0450***	6.5885***
Number of Observations	25	25	25	27	27	27	27
Adjusted R2	0.1519	0.2722	0.4514	0.3124	0.2692	0.2204	0.3223

Exhibit A59: p-Values from Pairwise t-Tests of Equality of Implicit Student Need Weight Estimates Between Pre- and Post-RBB Years

Elementary Schools - Total (Unrestricted and Restricted) Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.555			
2005-06	0.072	0.031		
2006-07	0.001	0.001	0.071	
Elementary Schools - Total (Unrestricted and Restricted) Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.862			
2005-06	0.051	0.105		
2006-07	0.001	0.007	0.094	
Middle/High Schools - Total (Unrestricted and Restricted) Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.305			
2005-06	0.545	0.380		
2006-07	0.537	0.509	0.851	
Middle/High Schools - Total (Unrestricted and Restricted) Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.280			
2005-06	0.556	0.311		
2006-07	0.574	0.386	0.926	
Elementary Schools - Unrestricted Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.028			
2005-06	0.142	0.115		
2006-07	0.632	0.017	0.033	
Elementary Schools - Unrestricted Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.081			
2005-06	0.239	0.218		
2006-07	0.440	0.039	0.034	

Exhibit A59 (continued): p-Values from Pairwise t-Tests of Equality of Implicit Student Need Weight Estimates Between Pre- and Post-RBB Years

Middle/High Schools - Unrestricted Funding With Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.680			
2005-06	0.504	0.673		
2006-07	0.482	0.608	0.768	
Middle/High Schools - Unrestricted Funding Without Teacher Subsidies				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.626			
2005-06	0.516	0.716		
2006-07	0.531	0.721	0.888	
Elementary Schools - Restricted Funding				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.037			
2005-06	0.000	0.000		
2006-07	0.000	0.000	0.014	
Middle/High Schools - Restricted Funding				
	2002-03	2004-05	2005-06	2006-07
2002-03				
2004-05	0.038			
2005-06	0.422	0.000		
2006-07	0.923	0.006	0.313	

Exhibit A60: p-Values from Pairwise t- Tests of Equality of Implicit Student Need Weight Estimates Between Pre- and Post-WSF Years

Elementary Schools - Total (Unrestricted and Restricted) Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.368						
2002-03	0.883	0.470					
2003-04	0.747	0.344	0.736				
2004-05	0.571	0.932	0.473	0.263			
2005-06	0.960	0.559	0.910	0.702	0.362		
2006-07	0.940	0.501	0.934	0.741	0.355	0.977	
Middle/High Schools - Total (Unrestricted and Restricted) Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.974						
2002-03	0.705	0.353					
2003-04	0.499	0.195	0.554				
2004-05	0.343	0.099	0.139	0.396			
2005-06	0.131	0.038	0.031	0.051	0.046		
2006-07	0.200	0.088	0.092	0.106	0.169	0.648	
Elementary Schools - Unrestricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.377						
2002-03	0.716	0.743					
2003-04	0.149	0.329	0.061				
2004-05	0.041	0.072	0.041	0.259			
2005-06	0.009	0.025	0.005	0.097	0.655		
2006-07	0.079	0.197	0.091	0.691	0.381	0.081	
Middle/High Schools - Unrestricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.847						
2002-03	0.906	0.846					
2003-04	0.398	0.029	0.013				
2004-05	0.396	0.070	0.027	0.684			
2005-06	0.165	0.032	0.017	0.101	0.025		
2006-07	0.150	0.039	0.024	0.101	0.037	0.448	

Exhibit A60 (continued): p-Values from Pairwise t-Tests of Equality of Implicit Student Need Weight Estimates Between Pre- and Post-WSF Years

Elementary Schools - Restricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.228						
2002-03	0.322	0.760					
2003-04	0.072	0.125	0.096				
2004-05	0.355	0.932	0.860	0.212			
2005-06	0.117	0.328	0.485	0.885	0.191		
2006-07	0.095	0.296	0.478	0.919	0.252	0.967	
Middle/High Schools - Restricted Funding							
	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
2000-01							
2001-02	0.755						
2002-03	0.057	0.000					
2003-04	0.877	0.964	0.264				
2004-05	0.804	0.592	0.211	0.728			
2005-06	0.913	0.741	0.201	0.811	0.891		
2006-07	0.158	0.297	0.004	0.586	0.087	0.042	

SBF and Economies of Scale

Exhibit A61: Implicit Enrollment Weights Using Total Expenditures for San Francisco Elementary Schools from 2000-01 to 2006-07 (Implicit Weight Centered at Enrollment=365)

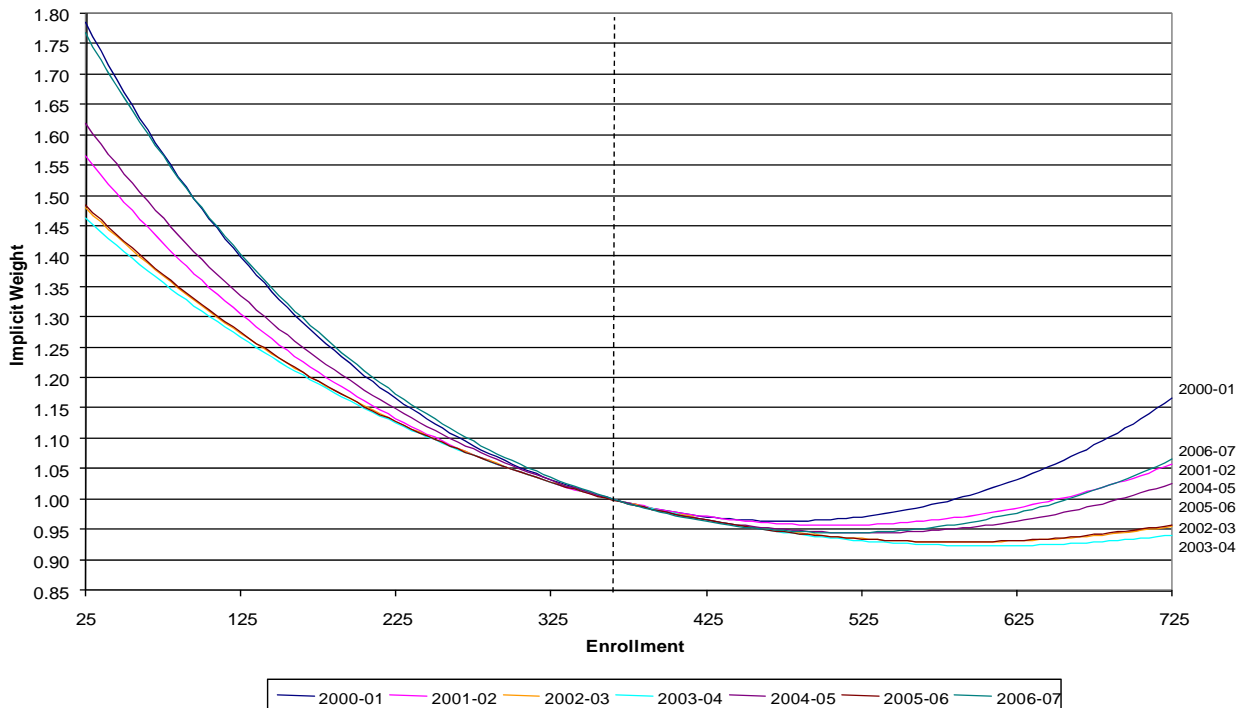


Exhibit A62: Implicit Enrollment Weights Using Total Expenditures for San Francisco Middle and High Schools from 2000-01 to 2006-07 (Implicit Weight Centered at Enrollment=1,000)

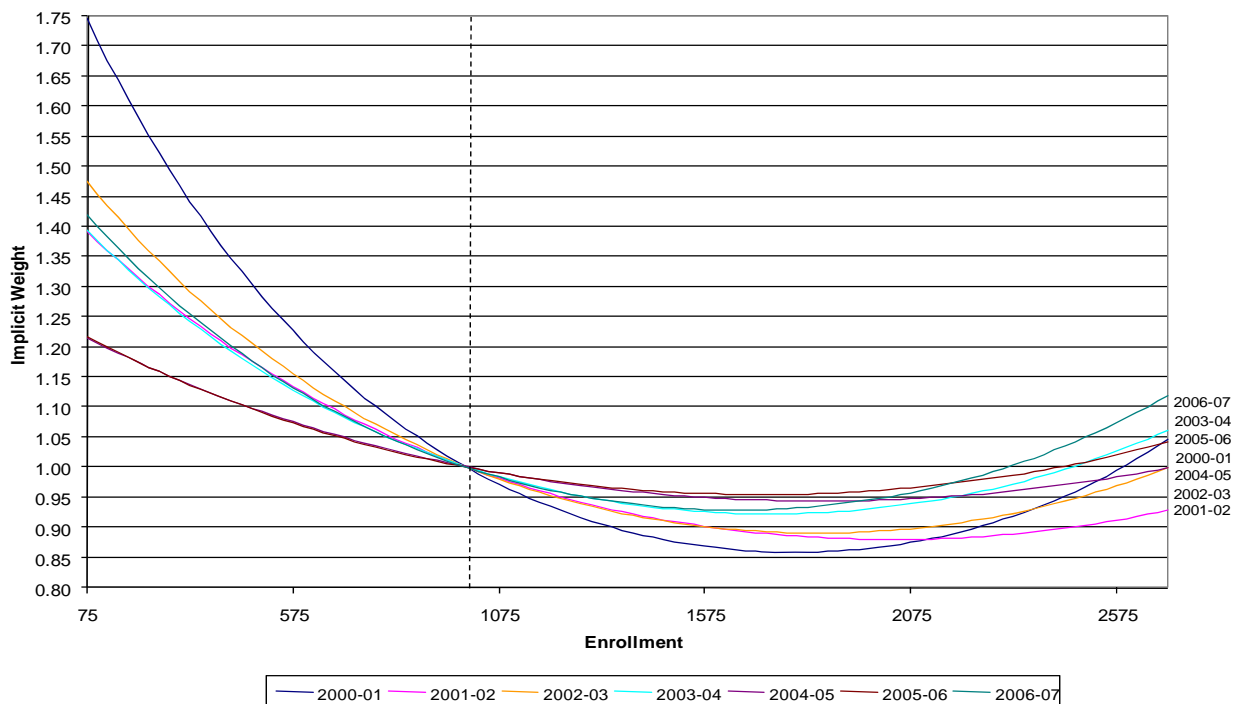


Exhibit A63: Implicit Enrollment Weights Using Total Expenditures for Oakland Elementary Schools from 2000-01 to 2006-07 (Implicit Weight Centered at Enrollment=365)

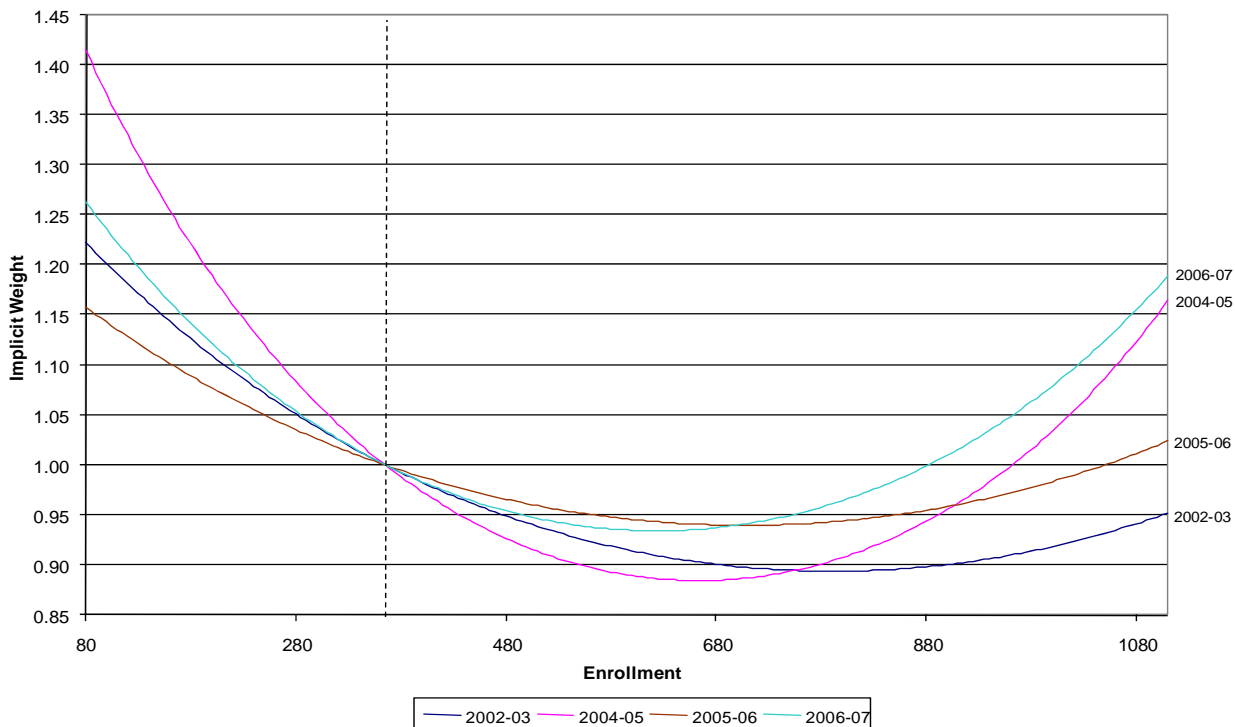
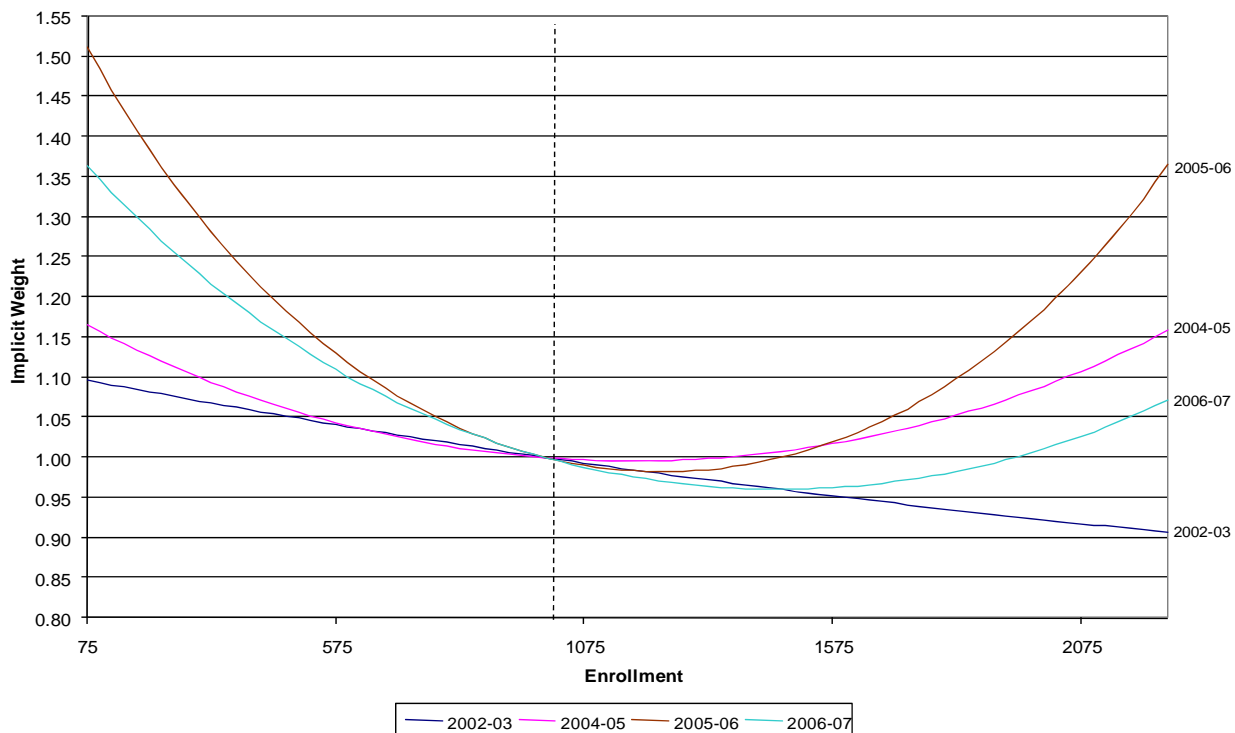


Exhibit A64: Implicit Enrollment Weights Using Total Expenditures for Oakland Middle and High Schools from 2000-01 to 2006-07 (Implicit Weight Centered at Enrollment=1,000)



Additional Analyses Available Upon Request

In addition to the data we analyzed for the report, we also produced the following analyses that are not included in the appendix. Results from these analyses are available upon request.

Exhibit A65: List of Additional Analyses Not Included in this Report

Examined Resources
FTEs per 100 Students – Administrator
FTEs per 100 Students – Pupil Support
FTEs per 100 Students – Teachers
FTEs per 100 Students – Paraprofessional
FTEs per 100 Students – Clerical
FTEs per 100 Students – Other Classified
Experience – Administrator
Experience – Pupil Support
Experienced (Three or More Year) Teacher FTEs Per 100 Students
Experience – Teachers Authorized and Assigned in Elementary Education
Experience – Middle/High Teachers Authorized and Assigned in Core Subjects
Experience – Teachers Authorized by Subject
Experience – Teachers Assigned in Subject
Status – Teachers (Tenured, Probationary, and Long-Term Substitute, or Temporary Employee)
Credential – Teachers