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CHAPTER 1: INTRODUCTION

ORGANIZATIONAL MISSION

Research for Democracy was initiated in 2000 by Anne Shlay, professor from the Department of Sociology at Temple University, and Steve Honeyman, director of the Eastern Pennsylvania Organizing Project. Its mission is to develop applied research skills and leadership capacity within neighborhoods across Philadelphia. Research for Democracy works from the foundation that communities, not narrow self-interests, are in the best position to guide public policy. To that end, it works side by side with community leaders and parents to understand pressing neighborhood issues and influence policy decisions through the use of research.

Research for Democracy combines scholarly research with community organizing to achieve real change at the neighborhood level. It seeks to build the organizing capacity of civic and religious leaders to participate in public policy decisions that affect their neighborhoods. It works with these leaders to develop and undertake large scale research projects that support and advance community organizing efforts. With an emphasis upon inclusive and informed decision-making, Research for Democracy projects seek to legitimize the role of civic and religious leaders in the policy-making process.

ORGANIZATIONAL HISTORY

Research for Democracy is a joint project of the Department of Sociology at Temple University and the Eastern Pennsylvania Organizing Project (EPOP). The Department of Sociology is a leading research department within Temple’s College of Liberal Arts. One of its key charges is to conduct quality applied research to inform sound policy-making aimed at reducing social inequality. EPOP strives to organize communities for change by working with civic and religious leaders to build power in neighborhoods across the City and region. EPOP member organizations include faith institutions, schools, student
organizing groups and other neighborhood groups representing more than 40,000 low to moderate income families across the City.

Since the state-initiated takeover of the School District of Philadelphia in 2001-2002, EPOP has been particularly involved in issues of educational equity. Working in partnership with parents, teachers and District administration, EPOP has succeeded in securing additional resources for disadvantaged neighborhoods including: new small schools, new school facilities, new bilingual education programs and new school libraries; restoration of Title I dollars; improved school safety; professional development training for new District principals. In addition, EPOP is also part of a new city-wide coalition committed to decreasing the number of “out of school” youth in Philadelphia.

PROJECT DESCRIPTION

Research for Democracy’s (RFD) Intradistrict Inequity Project seeks to increase public understanding and accountability over the distribution of instructional resources in the School District of Philadelphia (District). This Project was initiated by parent leaders from EPOP concerned about the quality of instruction in disadvantaged neighborhood schools. This Project builds upon: (a) our previous work to bring parent and teacher voices into local and national discussions of urban education reform and (b) EPOP’s work on the fair distribution of Title I dollars.

The purpose of the Intradistrict Inequity Project is two-fold: (a) Understand how instructional dollars are distributed across elementary schools in the District and (b) Influence the distribution of instructional dollars in the District. The goal of the Project is to ensure that all Philadelphia public school students receive the instructional resources they need to achieve in school and beyond. More importantly, this Project is designed to move the District towards a more equitable distribution of instructional resources. As such, the Intradistrict Inequity
Project seeks to protect every child’s inherent right to equal access to a high quality public education.

EDUCATIONAL EQUITY FRAME

We approach or frame the study topic—the distribution of instructional resources across elementary schools—in terms of educational equity. An equity frame implicitly acknowledges “schools serving students with different levels of need [must] receive appropriately different levels of resources” (Rubenstein & Miller, 2005, p. 2). It is important to distinguish between equalization policies, or equal instructional resources for all students, and educational equity. “An equitable system would not provide the same level of support for each school; rather, some students, teachers, and schools require and would get more and different supports and resource” (Grady et al., 2004, p. 6). In fact, federal policies like Title I, require an equitable distribution of educational resources. “Because poor children often enter school behind, they need extra educational services to catch up” with their more affluent peers (Education Trust, 2006, p. 11).

Educational equity is imperative to guaranteeing equal educational opportunity for all students in general, and poor students of color in particular. An equitable distribution of instructional resources requires matching resource investments with individual student learning needs. We believe our educational equity frame is congruent with the District’s formal “Declaration of Education”:

We believe all children can reach their learning potential and that the achievement gap can be eliminated. The District…must provide equal access to quality education regardless of race, family income, gender, native language, special needs or area of residence. Providing equal access to high quality education for every child may require the investment of unequal resources to ensure an equitable outcome.

Furthermore, we contend that all students cannot be expected to achieve their full potential in the absence of equal, let alone equitable, instructional resources.
RESEARCH DESIGN

Intradistrict studies, or the study of resource distribution across schools in a single district, are central to discussions of the efficacy of equal educational opportunity. To achieve educational equity, or “positive learning outcomes for all students…school districts and communities [must] confront deep structural problems in the way human, material, and financial resources—the fundamental conditions of learning—are allocated to schools throughout cities” (Grady et al., 2004, p. 4).

Our study is designed to explore the distribution of instructional resources in the context of educational equity. More specifically, we examine the distribution of teacher experience and teacher salary (instructional resources) between elementary schools in the District. Our analysis of staffing (teacher experience) and spending (teacher salary) patterns seeks to understand the relationship between resource allocation and elementary schools serving different concentrations of student needs. In other words, do schools serving high proportions of low income and low performing students receive “appropriately different levels” of instructional resources?

Research Questions

The study is intended to increase public awareness of staffing and spending disparities between elementary schools in the District. The timeframe for this study is 2001-2005. As such, our study speaks to the distribution of instructional resources in Philadelphia’s modern era of school reform. In general, we seek to understand if the District, under the leadership of CEO Paul Vallas and the School Reform Commission, is moving towards a more equal or equitable distribution of instructional staff and instructional dollars. More specifically, the following three questions guided our analyses of instructional resource distribution:
1. Is there an equitable distribution of instructional staff (teacher experience) between elementary schools in the District?

2. Is there an equitable distribution of instructional dollars (teacher salary) between elementary schools in the District?

3. What is the relationship between significant spending gaps (above and below average spending) and neighborhood conditions?

We used school, teacher and student data from the Pennsylvania Department of Education and the National Center for Educational Statistics in our analysis of staffing and spending patterns. Some 170 School District of Philadelphia public elementary schools were included in our analysis. Middle schools, high schools and charter schools were not included. Data were aggregated at the school level and the timeframe for our study is 2001-2005. We constructed individual school budgets using full-time classroom teacher salary data for every elementary school in the District. Non-instructional staff, such as principals, counselors and other staff, were not included in the analysis.

Instructional dollars, or the money spent on total teacher salaries, are the single largest expenditure on individual school budgets. These instructional costs account for between 77-80% of a school budget (District Interview). Using salary data, we constructed school budgets to compare actual instructional expenditures across all elementary schools in the District. School spending patterns were also compared with a calculated districtwide average salary figure (across all elementary schools). In terms of educational equity, we compared expenditures across schools serving different concentrations of student poverty. In a smaller cohort of schools (59) with significant spending gaps, we examined the relationship between staffing and spending variables and neighborhood characteristics.
SUMMARY STUDY FINDINGS

We present findings from qualitative interviews with individuals involved in Philadelphia’s public schools. Interview respondents include District personnel, EPOP leaders, a congressman, a councilman and a District elementary teacher. The interview data speak to inherent constraints in the distribution of instructional resources across all schools in the District, as well as point to potential opportunities towards a more equitable distribution of instructional staff and spending. Interviews were critical to understanding the myriad issues affecting the distribution of teachers and instructional dollars and helped us refine our analysis and policy recommendations.

Theme 1: The Real Issue

Study respondents indicated that issues of teacher quality and instructional spending were critically important.

At the end of the day, teachers are the most valuable input in the equation. Who is in front of the classroom makes a difference. (Congressman)

My argument is that experienced teachers can pull kids up. (Teacher)

From my perspective, the real issue is how do we make the job doable for principals and teachers. That means having enough resources so that staff have the opportunity to be successful with the kids. (District VP)

Theme 2: Spending Disparities

The practice of giving less instructional resources to schools serving students with the greatest learning needs was seen as highly problematic. Study respondents felt spending disparities were primarily responsible for chronic achievement gaps between schools, not family background, poverty status or race/ethnicity.

People want to say that kids aren’t learning because they are from a single parent family or because they are poor or that it’s the kids’ fault. The truth is, they aren’t getting the same resources…and they don’t have as many highly qualified teachers. (District VP)
How can we have high tech schools of the future for all students on little house of the prairie budgets? This is a theft of an education of thousands of students. Worse is, this robbery is knowingly done. (EPOP Leader)

Where’s the logic in that? Students who we know don’t get the same resources, still have to meet the same standards. (Congressman)

**Theme 3: Teacher Experience**

Study respondents indicated that experienced teachers make a difference.

High quality teachers bring better perspectives to the classroom. Every teacher with a master’s degree isn’t great, but more often than not, they bring more to the table. (District VP)

The public doesn’t see teachers as the professionals they are. Experience matters and we have to be real about this issue. (EPOP Leader)

You ask most principals and I’m sure they’d be happy to keep most of their older teachers…Ask the parents and families. I would take an experienced teacher over a new teacher. (Teacher)

**Theme 6: Drafting Teacher Talent**

Study respondents felt various factors work against disadvantaged schools in the effort to attract more experienced teachers.

The condition some of these buildings are in is a strong deterrence. Teachers want clean, safe and attractive environments. They want to know that the neighborhood outside has the same qualities. Good teachers are going to flock to these schools. (Councilman)

Do not lose sight of the fact that hiring decisions are not made in a vacuum. Recent graduates and new teachers are drawn to the suburbs by salary considerations and working conditions. (Congressman)

The teacher may have certain perceptions of the neighborhood; crime rates are high or the neighborhood itself is dangerous…Sometimes the issue can be as small as parking. Other times, teachers create issues as an excuse to leave. And sometimes, it’s their perception of parents, like ‘why are these parents always fusing at me.’ (EPOP Leader)
Theme 7: Principal Role

Study respondents agreed that “principal leadership is a major force in the success of a school.” (EPOP Leader)

There are numerous reasons why teachers chose to leave the District. Lack of team support, weak leadership and a toxic environment. Working conditions…these are largely leader driven. (District VP)

For schools to work well, you need a strong principal to establish a family setting. The principal’s relationship with teachers is very important. Leadership that is dynamic, that is what will attract good teachers. (District Administration)

Theme 8: Staffing Recommendations

Study respondents had numerous recommendations for creating a more equitable distribution of experienced teachers by targeting high poverty schools.

Teachers have to be included in real decision making roles…If they are not included, they will leave…Giving teachers the time to build a team, to talk and grow, takes time and cost money. But it is very important to the kids learning. (District VP)

Instead of school-based professional development, why not bring a mix of teachers together from different schools to share best practices. This would be an opportunity for new teachers to be groomed by veterans. And the kids would benefit too. (EPOP staff)

Teachers would teach in some of the disadvantaged schools if they could get the resources—like books, class size and principal support—they need. (Teacher)

Give new teachers full opportunity to utilize training and expertise of more senior teachers. New teachers should be matched with more senior teachers in partnership. Right there, you automatically reduce class size…We need to prepare new teachers so that one day, they can have their own classrooms. (Councilman)

Theme 9: Spending Recommendations
Study respondents were in favor of equalizing the distribution of instructional resources across schools. Various recommendations were proposed to improve the learning environment in high poverty schools.

*The idea is to take what a successful low poverty school has and ensure there are comparable resources for the high poverty school.* (Congressman)

*Schools should have a decision and role in how funds are used to improve the learning environment.* (District VP)

*Adding extra dollars to the pot would be very helpful. If you improve the teaching environment, like reducing class size, high quality teachers will follow.* (EPOP Leader)

*If we had enough money, more teachers could do home visits and make a connection between parents and schools, and perhaps engage parents in their child’s education.* (Teacher)

**Theme 10: Spending Constraints**

Study respondents identified numerous constraints to a more even distribution of instructional resources, namely, “where’s the money going to come from?”

*The idea is not to take our best schools and deplete them. With the salary cap scenario, where the pot of money does not increase, if you pull resources out of schools with more resources, you will only push highly qualified teachers out of the district.* (Congressman)

*We are a School District that remains significantly underfunded.* (District Administration)

**DISTRIBUTION of INSTRUCTIONAL STAFF**

Our analysis of staffing patterns across District elementary schools reveals that schools with the highest concentrations of student poverty (80% and above) have the highest concentrations of inexperienced teachers in the District. Nearly three-fourths of all elementary schools in our sample were high poverty elementary schools; these schools are significantly more likely to be located in predominately African American and Latino neighborhoods.
On average, teachers in low poverty elementary schools had 8 more years experience and earned nearly $9,000 more per year than teachers in schools with the highest levels of student poverty. There is a precipitous drop in average teacher experience in schools serving the greatest numbers of poor students of color. There is an inverse relationship between student poverty and student achievement as measured by the 5th graders reading performance scores. On average, 30 percentage points separated the reading scores of students in low poverty and high poverty elementary schools.

The confluence of concentrated student poverty, low achievement scores and inexperienced teachers suggest that students with the greatest learning needs are effectively denied equal access to educational opportunity. Our analysis suggests schools serving the highest concentrations of poor students of color are disproportionately affected by disparate staffing patterns. We conclude that the distribution of teacher experience across District elementary schools is not only unequal, it is highly inequitable.

**DISTIBUTION OF INSTRUCTIONAL DOLLARS**

We used salary data at the school level to analyze the distribution of instructional dollars across elementary schools. We find that schools that spend more on total teacher salaries actual spend more per pupil. Average experience and average salary are related to levels of instructional spending. In 2001, schools with the lowest rates of student poverty spent $270 more per student than high poverty schools. By 2005, low poverty elementary schools were spending close to $700 more per student.

Salary data were also used to calculate instructional spending gaps across different school poverty categories. These calculations control for variations in faculty size and compare actual instructional spending with average districtwide spending. In turn, we then determine how much each school spent
above or below average spending levels to support instruction. Average teacher salary assumes a critical role in these comparisons and is a power indicator of spending equity. Simply stated, schools with average teacher salaries in excess of the districtwide salary figure actually spent more (above average) to support instruction.

Schools with below average, or negative instructional spending gaps were disproportionately located in neighborhoods with the highest concentrations of poverty and ethnic minorities. Over one third of high poverty elementary schools spent significantly less to support instruction; less than 10% of high poverty elementary schools had positive or above average levels of instructional spending. Conversely, low and med low poverty elementary schools, or schools with the lowest concentrations of poor student of color, had a district spending advantage.

In 2005, for example, the average low poverty elementary school spent some $200,000 above the districtwide instructional expenditure, while the average high poverty school spent $43,000 less than average. In other words, low poverty elementary schools spent more than $240,000 more than the typical high poverty school to support classroom instruction. Increased levels of student poverty are associated with decreased levels of instructional expenditures.

An educational equity approach acknowledges that schools with the highest concentrations of poverty have the greatest learning needs; therefore, these same schools should receive equal, if not more, instructional resources than more advantaged neighborhood schools. However, disadvantaged elementary schools in the District actually spend less per student and have the most disparate spending gaps. **We conclude that the distribution of instructional dollars across District elementary schools is not only unequal, it is highly inequitable.**
SIGNIFICANT SPENDING GAPS & NEIGHBORHOOD CONDITIONS

We focused the last portion of our analysis on elementary schools with significant instructional spending gaps. We identified those elementary schools with above and below average spending gaps in excess of $100,000 annually from 2001-2005. Schools with significant spending gaps had the most inequitable spending patterns in the District—these schools consistently spend far above or far below the average districtwide expenditure.

Elementary schools with significant, below average levels of spending gaps were disproportionately located in disadvantaged neighborhoods. Homes in these neighborhoods sold for less than half the citywide median sale price and experience elevated levels of aggravated assaults. From 2001-2005, the average teacher salary in elementary schools with significant spending gaps was over $11,000 more than the salary in schools with significant, negative spending gaps. Elementary schools with significant resource capacity averaged 19 years experience compared with 9 years in schools with significant resource deficiencies.

On average, over-resourced elementary schools spent more than $600 more per student than under-resourced elementary schools. In 2005, 50% of students in over resourced schools achieved academic proficiency or excellence compared with 25% of students in schools with significant resource disparities.

Significantly less money is being spent on instruction in disadvantaged neighborhood elementary schools, particularly schools serving the highest concentrations of poor and minority students. The overlapping issues of concentrated poverty, low test scores, high crime rates and instructional resource disparities suggests students in these schools have some of the highest levels of student need. Clearly, instructional resources were allocated in a manner that consistently favors affluent, high performing neighborhood schools. Economically
depressed neighborhoods were more likely to experience an under provision, or inequitable provision, of instructional resources.

TEACHER ASSIGNMENT PRACTICES CAUSE DISPARITIES

The inequitable distribution of instructional dollars is perhaps the single largest problem facing large urban districts. The issue is that students with the greatest learning needs—students most at-risk for academic failure—are not receiving the resources they need to achieve success in school and beyond. In Philadelphia as elsewhere, low income and minority students actually receive less instructional dollars than their more affluent peers. This disparity in educational resources effectively denies students the opportunity to an equal education. The School District of Philadelphia is also highly segregated—both in terms of race and class—exacerbating this problem.

One of the biggest challenges before a more equitable distribution of instructional resources is the way in which the District allocates public funds (local, state and federal tax dollars) to individual schools. Instructional dollars are distributed to individual schools based on total student enrollment. To be clear, the District, working under the provisions of its contract with the Philadelphia Federation of Teachers (PFT), allocates teaching positions to schools based on enrollment figures for the previous school year.

Under the provisions of this contract, half of the vacant teaching positions in the District are filled through seniority-based transfers and half are filled through site-based selection. The seniority-based provision allows teachers with sufficient years of classroom teaching experience and education to transfer to positions in schools of their choice. The site-based selection provision allows a
school-based team composed of the principal, teachers, and parent leaders to chose the teacher to fill the vacancy.\footnote{While we applaud the District’s success in negotiating the site-based selection provision, it is too early to assess whether it is having the desired affect on the distribution of instructional dollars and student outcomes.}

The lack of checks and balances on the seniority-based transfer provision is largely to blame for the inequitable distribution of instructional dollars in Philadelphia. Our analysis of teachers’ years of classroom experience shows that the District’s most qualified, and arguably most effective teachers, appear to regularly transfer out of low performing schools in low income African American and Latino neighborhoods into high performing schools in more affluent, whiter neighborhoods.

While teachers are not necessarily to blame for choosing to transfer to higher performing schools, the net result is devastating. In essence, students with the greatest learning needs—the majority of public school students in the City—are being taught by the District’s most inexperienced teachers. Our research demonstrates that schools that spend more on teacher salaries have significantly higher test scores. We believe that instructional spending is driving student performance and widening the achievement gap between students from different ethnic and income groups.

The problem with the existing teacher-based allocation system is that it does not control for imbalances in teacher experience and the resulting significant gaps in instructional spending. Schools that are able to attract highly-experienced teachers have higher average teacher salaries and spend a larger share of instructional dollars than schools with the least experienced teachers. To date, there has been little institutional will or commitment to examine and correct the disparities in instructional dollars between schools.

Another problem with the current teacher-based practice is there is little public accountability. Are public tax dollars being distributed fairly? Again, our
analysis of teacher salary data reveals that students in low income neighborhoods received less instructional dollars than their more upwardly mobile peers. The District is not providing students with equal resources to achieve.

Moreover, the staff-based allocation process makes it extremely difficult to “follow the money” and verify that discretionary funding sources, like Title I and Desegregation, are being spent appropriately or serving their intended purpose—providing disadvantaged students with the necessary resources to excel.

Like many urban districts, the School District of Philadelphia uses a city-wide average salary figure on individual school budgets. Thus, it appears that every teacher earns the same salary—or that every school receives the same money to hire teachers. This is simply not true. Use of a district-wide average salary figure obscures the very real variations in average salary between schools, especially low poverty and high poverty schools. Our findings demonstrate that differences in average teacher salary between schools lead to significant spending gaps, particularly in terms of per-pupil expenditures.

RECOMMENDATIONS

We recommend the School District of Philadelphia explore and implement the following policy levers towards a more equitable distribution of instructional resources. Our recommendations do not require a substantial infusion of new revenue—it is beyond the scope of this report to predict or estimate how much money it would actually cost to truly make public education equitable in Philadelphia. Our underlying contention is that the District does not distribute instructional resources in fair or predictable manner. The District must do more to increase instructional capacity in schools serving poor students of color.
**Report Real Spending**

The District should report actual instructional expenditures on individual school budgets and make this information readily available to parents. The use of a districtwide average salary figure is misleading and obscures very real disparities in actual instructional spending.

**Make Teacher Assignment Practices Equitable**

Working in partnership with the Philadelphia Federation of Teachers (PFT), the District should revise current assignment practices towards a more equitable distribution of experienced teachers and instructional dollars. The following changes should be made to the 2008 collective bargaining agreement and related District policies: (a) 100% site selection for all schools, (b) formal policy on Balancing Teacher Experience, (c) prohibit hiring unexperienced teachers in disadvantaged schools and (d) targeted financial incentives for teachers opting to work in disadvantaged schools.

Districtwide initiatives to enhance instructional capacity and spending should be specifically targeted to “hard-to-staff” or disadvantaged schools (i.e., serving a disproportionate number of low income and minority students). Viable financial incentives (i.e., $10,000/year for 3 years) should be given to both experienced and effective teachers opting to teach in disadvantaged schools. The District should partner with PFT and educational researchers to devise sophisticated tracking software to identify effective teachers. Longitudinal value-added data tracking changes in student test performance from year to year should be used to identify the District’s best teachers. Additional non-monetary incentives (i.e., reduced course load) should be provided to the best teachers working in the neediest schools. The best teachers should be matched with teams of new teachers to enhance instructional capacity.
**Money Follows the Student**

The District should replace “resourcing practices,” namely teacher-based allocations, with student-based budgeting. Individual schools should receive instructional dollars, not teaching positions, based on total student enrollment and student need. This means every student would receive a base allotment and additional dollars would be added for poverty status, learning need, language access and other student factors. These student-driven instructional dollars would then be given to individual schools to hire teachers, purchase materials, provide training and other teaching enhancements. A student-based budgeting process would actual provide more instructional dollars to schools serving the neediest students (i.e., highest poverty concentrations). This is the only way to ensure educational equity and equal opportunity for disadvantaged students:

*The District...must provide equal access to quality education regardless of race, family income, gender, native language, special needs or area of residence. Providing equal access to high quality education for every child may require the investment of unequal resources to ensure an equitable outcome. (SRC Declaration of Education)*
CHAPTER 2: LITERATURE REVIEW

DISTRIBUTION OF INSTRUCTIONAL STAFF

Poor Students of Color Short-Staffed

Within large urban districts, disparities in the distribution of experienced teachers are widely recognized. Intradistrict, or within district studies, demonstrate that poor students of color are effectively denied equal access to highly qualified and experienced teachers. Schools in high poverty, high minority neighborhoods experience high rates of faculty instability and employ a disproportionate amount of newer, inexperienced teachers. By comparison, schools in more affluent, whiter neighborhoods retain a distinct staffing advantage in terms of traditional measures of teacher quality. The persistence of disparate staffing patterns appear to perpetuate a system of separate and unequal education within urban districts.

Gaps in teacher quality and experience continue to plague schools serving predominately African American, Latino and low income students. Educators, advocates and policymakers readily acknowledge the racial and economic dimensions of disparate staffing patterns. There is “a devastating difference between schools serving poor and minority children and those serving other young Americans—a pervasive, almost chilling difference in the quality of their teachers” (Education Trust, 2000, p. 2). Compared with their peers, poor students of color are essentially short-staffed on teacher experience.

UNEQUAL STAFFING PATTERNS

A growing body of literature seeks to describe urban staffing disparities in terms of traditional measures of teacher quality or good teaching. As Kevin Carey notes, “No matter how you define it, low-income and minority students are systematically assigned to the least qualified teachers” (Education Trust, 2004, p. 36). The domains used to define or describe teacher effectiveness include:
educational training, teaching experience, certification and performance on teaching tests.

**Findings from the Staffing Literature**

The following list summarizes findings from five recent studies on teacher experience in schools serving low income and minority students:

‘Classes in high-poverty schools are 77 percent more likely [to] be taught by teachers without subject matter training than those in low-poverty schools.’ (Progressive Policy Institute, 2005, p. 8)²

Children in high-poverty and high-minority schools are twice as likely to be taught by inexperienced or uncertified teachers, and also more likely to be taught by teachers who scored poorly on college entrance exams. (Progressive Policy Institute, 2005, p. 8)³

Studies show that inexperienced teachers are significantly less effective than their peers. Nationwide, children in high-poverty or high-minority schools are almost twice as likely as other children (20% vs. 11%) to have novice teachers. (Education Trust, 2004, p. 36)⁴

Those who teach low-income and minority students are less likely to score well on standardized tests, such as teacher licensing tests, assessments of basic skills, and college admission exams. (Education Trust, 2004, p. 37)⁵

National data indicates that 21% of the teachers in the lowest-poverty schools attended ‘non-competitive’ colleges, compared with 39% of those in high-poverty schools. (Education Trust, 2004, p. 37)⁶

**INEQUITABLE STAFFING PATTERNS**

The above findings substantiate that low income and minority students do not have equal access to the most talented teachers in their respective school districts. More disturbing, considering the additional learning needs of students in disadvantaged schools, the literature suggests that disparate staffing patterns

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² Authors cite Jerald & Ingersoll, 2002 study on “out of field teaching.”
³ Authors reference *Schools and Staffing Survey* by the National Center for Educational Statistics (NCES). Date unknown.
⁴ Author references NCES, 2000 report “Monitoring quality: An indicators report.”
⁵ Author references Kain & Singleton, 1996 study on “equality of opportunity.”
⁶ Author references Wayne, 2002 study on “teacher academic skills.”
are not only unequal, they are inequitable. In their report “Teaching Inequality,” Heather Peske and Kati Haycock describe this inequity as follows:

Unfortunately, rather than organizing our educational system to pair these children with our most expert teachers, who can help ‘catch them up’ with their more advantaged peers, we actually do just the opposite. The children who most need strong teachers are assigned, on average, to teachers with less experience, less education, and less skill than those who teach other children. (Education Trust, 2005, p. 2).

Far from fair or equitable, the process used to match teachers with schools is biased against students with significant learning challenges. The overall absence of high quality teachers in disadvantaged schools “quite simply, enlarges achievement gaps” (Education Trust, 2005, p. 3).

**Erratic Staffing Patterns**

Findings from a study of teacher staffing patterns in elementary schools in the San Diego School District further illuminates the connection between poor students and inexperienced teachers. Ochoa and Jerjis (1996, p. 4-6) detail the disproportionate impact erratic staffing patterns have on disadvantaged neighborhood schools:

Teachers with three years experience routinely leave positions in poor neighborhoods for preferred placements in more affluent neighborhood schools. Consequently, “many low income schools have literally replaced their total teaching staff over a three year period.”

Schools with the most junior faculty have “the highest social mobility rates, have the most overcrowded conditions, and have the highest academic achievement gaps.”

Schools in ethnically diverse and economically depressed neighborhoods “are used as temporary training grounds in preparation for smaller and better school sites and assignments.”

**Chronic Teacher Turnover**

Research consistently demonstrates that schools serving high concentrations of poor students of color also experience high rates of teacher
turnover. In turn, high levels of mobility and instability within a school’s teaching faculty further complicates the issue of attracting effective instructional resources—experienced teachers.

As teachers accumulate experience in the system, they regularly transfer out of “hard-to-staff” schools to schools with more favorable working conditions. “[A]fter getting more experience and training under their belts, [teachers] move on to more affluent communities where students are less challenging to work with…and community and classroom demographics are more similar to the teachers” (Progressive Policy Institute, p. 9). A trend frequently referred to as a “hemorrhaging of good teachers,” Haycock notes “teachers in high-minority schools are twice as likely…not to leave the profession, but to leave their school for another school.” (Education Trust, 2000).

Unstable Learning Communities

High rates of turnover erode any sense of community or rapport among teachers in disadvantaged schools. Moreover, the perpetual cycle of experienced teachers being replaced by newer, inexperienced teachers has severe repercussions of student learning. The National Commission on Teaching and America’s Future concludes that a high mobility rate “creates unstable learning communities and…student achievement suffers” (Chicago ACORN, 2003).

A study of turnover rates among elementary school teachers further describes the debilitating affects of revolving door-like mobility trends. Schools with high rates of staff turnover “are less likely to have high levels of trust and collaboration among teacher [and] restart their instructional focus each year, resulting in a less comprehensive and unified instructional program” (Guin, 2004, p. 19). Perhaps more disturbing is the lack of applicants for positions in schools with high turnover rates. One researcher found elementary schools with low rates

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7 Authors reference study by Hanushek, Kain & Rivkin, 2004.
8 Author references NCES, 1998 study.
of turnover had an average of 150 applications per open position, compared with five or less in high turnover schools (Guin, 2004, p. 20).

Teacher Assignment Practices Cause Staffing Inequities

There is consensus among public education observers that teacher assignment practices are the root cause of disparate staffing patterns within urban districts. John Owen (1972) aptly concludes his analysis on the distribution of instructional resources as follows:

The immediate cause of the economic and racial biases in the allocation of teaching resources appears to lie in the teacher assignment system: the single city-wide salary schedule, the allocation of attractive teaching posts to the most experienced teachers, and, in some cities, the informal pressures that are exerted to keep black teachers in black schools. (Owen, 1972, p. 38).

Generally speaking, teacher assignment practices are governed by collective bargaining agreements and facilitated through a seniority based transfer process. While most teacher contracts now address the issue of racial balance in school faculties, few agreements include mandatory provisions toward a more equitable distribution of experienced teachers between schools.

Teacher autonomy in the assignment process, which increases in direct proportion to teacher experience, is seen as exacerbating unequal faculties across urban schools. Teacher control over assignment, as exercised through seniority based transfers, leads to the overbalance of experienced teachers in wealthier, whiter neighborhood schools. Put another way, seniority transfer rights facilitate high turnover rates in disadvantaged neighborhood schools serving poor students of color. And while a variety of push factors may explain why teachers choose to leave these schools, the net effect of uncontrolled transfers is clear—disparate staffing patterns throughout large urban districts.
More recent studies illustrate the connection between teacher allocation and instructional spending patterns. Scholars from the Center for Reinventing Public Education (CPRE) and the Education Trust find that traditional policies of teacher assignment are responsible for significant spending gaps between schools in large urban districts.

**Unequal Spending Across Districts (Interdistrict)**

The disparity in instructional expenditures between more affluent suburban districts and disadvantaged urban districts is well known. For example, the Education Trust analyzed instructional expenditures across districts in 49 states. In school year 2002-2003, 27 states actually provided fewer resources to high-poverty districts. “Across the country, $907 less is spent per student in the highest-poverty districts than in the most affluent districts” (Education Trust, 2005, p. 2). However, interdistrict resource distribution studies obscure spending disparities within districts.

**Unequal Spending Across Schools (Intradistrict)**

Within district resource disparities, particularly around instructional expenditures, are often more severe than interdistrict spending gaps (Rubenstein & Miller, 2005). Research conducted by Owens & Maiden (1999) finds larger per-pupil funding disparities within urban districts. Overall, schools serving higher percentages of African American students and students participating in subsidized lunch programs (a measure of students living in poverty) have lower levels of instructional spending (Rubenstein & Miller, 2005, p. 4).

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9 Author endnote: “This national figure is not the same as the average of each state’s funding gap. Rather, it is the difference between aggregate cost-adjusted, per-student funding level in the poorest districts among all states and the least poor districts among all states” (p. 11).

10 Authors reference study comparing inter- and intradistrict spending differences by Hertet, 1996.
HIDDEN SPENDING GAPS

The extent of spending differences between schools in large urban districts is not widely understood or acknowledged. Inequitable spending patterns remain largely hidden and “compound injustices facing low-income and minority students” (Education Trust-West, 2005, p. 1). Intradistrict staffing disparities both predict and perpetuate inequitable spending patterns between neighborhood schools.

A study conducted by researchers from the Center on Reinventing Public Education (CRPE) examined the discrepancy between published school budgets and actual instructional spending patterns. The authors used a “ground-up approach” to compare instructional expenditures at the school-level with publicly available salary information. Their analysis of instructional resource distribution in three urban districts and an adjacent suburban county uncovered “big and hidden differences” between reported and actual spending. “[V]ariations in teacher salaries create uneven spending patterns in ways that do not show up in official budget documents” (Roza & Hill, 2003, p. 12).

Owen's (1972) empirical analysis of staffing and spending trends in nine urban districts “shows that teacher salary expenditures per pupil are lower in low-income and non-white neighborhoods, and that the level of both teacher experience and verbal ability is also lower there” (p. 1). As Roza & Hill (3/7/2005) assert, “the real problem is not that New York City spends some $4,000 less per pupil than Westchester County, but that some schools in New York spend $10,000 more per pupil than others in the same city.”

Schools in more affluent neighborhoods attract and employ more experienced teachers; consequently, these same schools spend more on teacher salaries to support instruction. “A school with more senior—and therefore more ‘expensive’—teachers would actually receive more teaching dollars per pupil
than one with more junior teachers” (School Communities that Work, 2002b, p. 7).

Analyses of staffing and spending patterns consistently find “neighborhood economic and racial characteristics are a significant factor in determining instructional expenditures per student” (Owen, 1972, p. 34-35). Moreover, research suggests that a school spending more per student on teacher salaries “not only has teachers who are more highly qualified…but is also likely to have teachers who are more effective” (Education Trust-West, 2005, p. 4). Again, the confluence of teacher experience variables and spending patterns disproportionately affect African American, Latino and low income students.

Simply stated, poor and minority students alike are effectively shortchanged in terms of instructional expenditures per student. “No matter how the data are analyzed, it is clear that impoverished children and children of color are ill-served by the way we fund schools in this country” (Education Trust, 2005, p. 4). While the relative merits of individual metrics of teacher quality are subject to endless debate, differences in spending patterns are relatively straightforward—some schools spend more, some school spend less and unequal instructional expenditures disproportionately hurt poor students of color.

UNEQUAL SPENDING PATTERNS

Staffing disparities precede and effect instructional spending gaps. When teachers transfer from high poverty, high minority schools to preferred placements in more affluent schools, “they take their salaries with them” (Education Trust-West, 2005, p. 6-7). High rates of teacher turnover actually facilitate the movement of instructional dollars out of disadvantaged schools. The net effect of uncontrolled seniority based transfers “is a massive transfer of funds from our less-advantaged to our most-advantaged schools” (Education Trust-West, 2005, p.8).
Schools serving the highest concentrations of poor and minority students are unable to attract and retain the most experienced and talented teachers. Districts turn to newer, largely inexperienced teachers, to fill positions in disadvantaged schools. These “[n]ew teachers get paid lower salaries, and they fill many of the toughest teaching jobs in high-poverty and bilingual schools” (Metro Organizations for People, 2006, p. 2). The perpetual cycle of inexperienced teachers replacing more experienced and higher paid teachers practically guarantees unequal instructional funding across neighborhood schools. “Therefore, all things being equal, schools with higher paid teachers do not face a tighter budget constraint than those with lower paid teachers, and schools with lower paid teachers do not have additional resources for other purposes” (Rubenstein & Miller, 2005, p. 10).

The fierce competition for teacher talent in urban school districts is akin to a sports league without salary caps. Neighborhood schools essentially function as teams “competing for the most educated and experienced teachers with no financial penalty” (Stiefel, Rubenstein & Schwartz, 2004, p. 5). Some teams are overloaded with the most talented veterans in the league, and spend a greater share of league resources on player salaries. Other teams, however, have few veterans on their respective rosters and struggle to keep rookies around for more than a season or two and spend significantly less on player salaries. Worse still, these teams do not receive additional league revenues to improve facilities or develop teacher talent.

Findings from the Spending Literature

The following section summarizes findings from three recent studies on spending disparities between urban schools in terms of student demographic characteristics:

[A]nalysis of the school-funding patterns in three districts [Cincinnati, Houston & Seattle] shows that we cannot assume that dollars get distributed fairly and equitably across all schools in a district. Schools serving the lowest-income
communities and those with the largest numbers of minority students are usually most affected. (School Communities that Work, 2002a, p. 5)

In Cincinnati, per pupil expenditures ranged from $4,000 to $10,000. (School Communities that Work, 2002a, p. 10)

In California, 42 of the 50 largest districts spend less money on teachers in schools that primarily serve disadvantaged students. On average, $2,576 less is spent per teacher. For the average high poverty elementary school, the total spending gap is nearly $88,000. (Education Trust-West, 2005, p. 10)

At the high school level in California, over $81,000 less is spent over the course of the typical low income student’s high school experience. If this same student attends high poverty schools from Kindergarten through graduation, over $141,000 less is spent on her/his entire public education. (Education Trust-West, 2005, p. 10)

In Denver, the “highest poverty schools are taught by the lowest paid teachers. Bilingual schools get less for their teachers.” There is at-least a $2,500 difference in average salaries between schools. Moreover, the “lowest performing schools are taught by the lowest paid teachers.” Some $7,000 separates the average salaries of teachers in high and low performing schools. (Metro Organizations for People, 2005, p. 2)

**SPENDING GAPS AFFECT LEARNING**

Not surprisingly, these instructional funding gaps overlap with persistent achievement gaps within large urban districts, particularly among low income and minority students. Education scholars and advocates strongly believe that disparities in teacher experience and instructional spending effectively limit educational outcomes. “Public officials cannot in good conscience claim that they are committed to closing achievement gaps without an aggressive campaign to close funding gaps where they exist” (Education Trust, 2005, p. 8).

Though instructional expenditures and student test scores are imperfect measures of effective teaching and performance, the literature raises important questions about the fairness and equity of disparate spending patterns. Roza, Miller & Hill contend, “The salary gap between the two kinds of schools is a near-
perfect match to the gap between expected and actual student achievement that is the focus of much of the attention on No Child Left Behind" (2005, p. 13). Perhaps, for this reason, many observers of urban education describe the federal NCLB legislation as an unfunded mandate.

The inherent conflict between below average spending and above average expectations is further explored by legal scholar W. Norton Grubb:

> When the Bush administration set targets in NCLB of minimum levels of proficiency for all students, but failed to provide sufficient funding or technical assistance required for schools to develop the most effective resources, low performing schools face targets that they lack the capacity to meet. (Grubb, 2006, p. 10)

On average, low performing schools are more likely to be found in predominately African American, Latino and poor neighborhoods. These same schools, as the literature demonstrates, are significantly under-resourced in comparison with high performing schools in more affluent neighborhoods.

**Similar Standards, Inequitable Spending Conundrum**

Grady and colleagues also assert that large urban districts face significant challenges in closing achievement gaps under NCLB. Common constraints include “fiscal instability, difficult politics, and poor labor-management relations” (p. 4). Intradistrict funding disparities, however, appear to be insurmountable. The authors contend, “districts and communities [must] confront deep structural problems in the way human, material, and financial resources—the fundamental conditions of learning—are allocated to schools throughout cities” (Grady et al., p. 4). Arguably, equity in educational outcomes can not be achieved in the absence of equal access to effective instructional resources. “If districts are to achieve greater equity, they need to understand the ways resources are currently allocated, which often shortchanges the students who need the most support” (Grady et al., p. 5).
In their review of the efficacy of school finance litigation, Rebell & Wolff (2006) propose that disparate state financing schemes “continue to deprive many poor and minority children of the tools necessary to meet standards” (p. ii). The movement towards standards based reform that predominates education policy at the federal, state and urban district levels challenges schools to eliminate racial and economic biases in student achievement levels.

Standards based policies are rooted in the premise that “virtually all students can meet these high expectations if given resources for a genuine opportunity” (Rebell & Wolff, 2006, pp. 4-5). The success or failure of such reforms revolves around the critical word if—is it fair to expect all students to demonstrate academic proficiency in the absence of equal, let alone equitable, instructional resources for some students?

The literature clearly establishes that poor students of color do not have equal access to high quality instructional resources—both quality teachers and instructional spending. Urban schools serving high concentrations of African American, Latino and low income students face the seemingly intractable challenge of raising performance under severe human and financial resource constraints. Rebell & Wolff define the problem as follows:

The reason for these achievement gaps are clear: currently, the vast majority of poor and minority schoolchildren who have enormous extra learning needs attend schools that actually receive less funding and have fewer qualified teachers, larger classes, inferior facilities and poorer program offerings than schools attended by more affluent white students. (2006, p. ii)

The unequal distribution of teacher experience and per pupil expenditures underscores the enduring legacy of “dual education systems” and the elusiveness of equal opportunity for all students. Researchers at the Education Trust assert, “Funding gaps undermine one of our most powerful and core beliefs…that no matter what circumstances children are born into, all have the opportunity to become educated and, if they work hard, to pursue their dreams” (2005, p. 2).
**Teacher Assignment Practices Cause Spending Inequities**

The growing number of empirical and descriptive studies on disparate staffing and spending patterns across schools in large urban districts should compel policy makers and administrators to devise more equitable distribution systems. Like cities themselves, urban districts face exceedingly complex challenges and competing demands. Teacher assignment practices are widely viewed as the underlying barrier towards a more equitable distribution of instructional resources. While it is relatively easy to identify the root cause behind inequitable schooling conditions, urban districts are hard-pressed to implement effective and corrective policies.

Union contracts in general, and seniority transfer rights in specific, are frequently cited as perpetuating staffing and spending inequalities between schools. Collective bargaining agreements between teachers unions and urban districts prevent more deliberate and fair approaches to instructional disparities. “District and school leaders committed to tackling this problem are frequently paralyzed in combating this trend because the common sense strategies they might employ—more pay, smaller workloads, and the like—are often prohibited by the single salary schedule and other provisions of the [teachers’] contract” (Education Trust-West, 2005, p. 7).

Simply stated, district leaders have little control over the assignment of individual teachers to individual schools. Districts cannot force or compel more experienced and higher paid teachers to work in high poverty, high minority schools. Consequently, Rubenstein & Miller (2005, p. 16) aptly conclude, “Ensuring an equitable distribution of teachers while still protecting teachers' workplace rights presents one of the most vexing challenges for school-based funding systems.” In general, seniority transfer provisions allow more experienced teachers to exercise autonomy in filling vacated positions in
preferred schools. School districts and individual schools have relatively little control over where experienced teachers teach.

'Resourcing' Schools Obscures Real Spending Differences

More accurately, “Schools are ‘resourced’—given the things they need to operate—not truly funded” (CRPE, 2005, p. 5). Since teacher based allocations do not control for variations in teacher experience and compensation, such practices have a disproportionate affect on schools in low income, minority neighborhoods. Schools receive a fixed number of teaching positions based on total student enrollment. Schools with similar student enrollment receive equal teaching positions per pupil. Yet, average teacher salaries “are significantly lower in high poverty schools, leading to lower General Fund dollar allocations for high poverty schools” (Rubenstein & Miller, 2005, p. 5).

Researchers from CPRE find the process of distributing instructional resources to schools via teacher based allocations has an adverse impact upon schools in predominately low income, minority neighborhoods. Roza, Miller & Hill (2005) substantiate the link between instructional expenditures and teacher based allocation provisions. The common “practice of ‘resourcing’ a school through a formula of assigning teachers and using district-wide average salaries to estimate costs creates profound budgeting inequities among schools” (CPRE, 2005, p. 6).

Use of a districtwide average salary figure on individual school budgets actually obscures real variations in instructional expenses (or total salaries) across schools. Roza & Hill (2003) found salary cost averaging to mask significant intradistrict disparities in per-pupil spending between low and high poverty schools. Also known as salary averaging, this budgetary practice is extremely problematic since it “either inflates or deflates real expenditures at a

11 Authors reference 1998 study conducted by Rubenstein.
given school beyond what is reported” (CPRE, 2005, p. 6). In practice, salary averaging creates the façade of funding equity across schools:

In ‘resourcing’ schools, district allocation practices make no distinction between the $30,056 paid to the novice teacher…and the $58,579 paid to the veteran. And since teacher experience and education are not distributed evenly across schools, the effect is that teacher costs vary from school to school. (CPRE, 2005, p. 6)

In the absence of policies to balance instructional spending across schools, there is no formal process to restore salary differentials to disadvantaged neighborhood schools.

Previous studies by Roza & Miles uncover the “hidden inequities” behind disparate spending patterns within large urban districts. In addition to the imbalance in teacher experience and average salary, the following conditions further clarify why some schools spend more than others:

1. Total number of enrolled students
2. Total number of students with special needs
3. Strategic expenditures targeting specific school types (like middle schools)
4. Strategic expenditures for special programs (like magnet and gifted programs)
5. Differences in building or facility conditions
6. Central office control over instructional resource expenditures (School Communities that Work, 2002a, p. 9).

However, the relative influence of these additional factors pales in comparison to the affect of teacher allocation practices.

**Some Schools Win, Poor Schools Lose**

Urban school districts have relatively little control over the distribution of instructional resources. Teachers drive instructional resource capacity and schools compete for teacher talent. Some schools have an unfair advantage and attract and retain a disproportionate share of experienced teachers. These schools spend more instructional dollars per-pupil and benefit from systemic inequities built into the teacher assignment process. “The only way districts can afford to pay more expensive teachers that congregate in certain schools is by
drawing on the dollars saved on the low cost teachers in schools with the most junior staffs” (Roza & Hill, 2003, p. 8).

Schools in impoverished communities “have almost no choice whom they employ, and their teachers are disproportionately young and inexperienced” (Roza & Hill, 2003, p. 7). These so-called “hard-to-staff” schools simply cannot compete in the teacher marketplace and do not have the instructional capacity to meet student needs. “We take the children who are most dependent upon their teachers for academic learning and assign them our weakest teachers” (Education Trust, 2000, p. 11). Because high poverty, high minority schools are short-staffed in terms of teacher experience, they are similarly short-changed in terms of instructional spending. Addressing chronic disparities in the distribution of instructional resources requires a fundamental shift in district’s laissez-faire approach to teacher assignment.

**LITIGATION ON INSTRUCTIONAL RESOURCES**

*Separate and Unequal Learning Communities*

Many observers agree that public education litigation has not yet fulfilled the promise of *Brown v. Board*. Federal and state court decisions have not led to substantial improvements in the quality of education for most inner city classrooms. Poor students of color “continue to experience segregated schools—inequitable schooling conditions based on racial and wealth differences as well as a mix of unsuccessful strategies intended to comply with the *Brown decision*” (Reyes & Rodriguez, 2004, p. 5). Perhaps more disturbing is the trend of resegregating neighborhood schools within large districts. Citing the work of Orfield and his colleagues, the authors note “there continues to be evidence of the resegregation of students and persistently disparate schooling conditions and outcomes” (footnote, page 18).

Michael Grady, Ellen Foley and Frank Barnes (2004) raise similar concerns about the continued efficacy of *Brown* in the modern era of school
reform. “[T]oday we still see school systems that are separate and unequal. Under-funded urban districts struggle through problems endemic to communities of concentrated poverty” (p. 1). The authors assert that attempts to achieve racial integration through the courts has not addressed underlying problems—“an environment in which Black children were made to feel inferior and received an inferior education” (Grady et al., p. 3). Since Brown’s passage, however, the courts’ interpretation of “educational equity” has changed “from equal resources, to equal access to the same schools, to equal results for all student groups” (Grady et al., p. 4).

Grubb (2006) contends that equal opportunity approaches remain an elusive proposition for disadvantaged urban schools. The author is critical of past efforts to advance equality of opportunity because this approach “promises equity in the race for success, not equality in results” (Grubb, 2006, p. 5). Moreover, “the historical tendency to rely on equal opportunity as a substitute for equality of outcomes prevents this application from being popular” (Grubb, 2006, p. 9). Grubb’s underlying contention is that attempts to equalize funding across schools rarely consider how additional funds might or should be used to close disparate achievement gaps (p. 14).

**School Districts Mismanage Money**

An equal distribution of instructional funding does not, in and of itself, guarantee that poor students of color will achieve at higher levels. In short, “there are many ways that revenues may be wasted within schools” (Grubb, 2006, p.14). Grubb asserts that school districts mismanage finite instructional dollars in various ways, including money spent on:

- inputs that have no effects…rents such as increases in salaries not tied to greater teacher effort or that do not reduce turnover, or worthless inputs such as [materials] unused by teachers who did not want them. (p. 14)

- purely symbolic practices—a new retention program or a new superintendent to assure parents that everything possible is being done. (p. 14-15)
[initiatives] with potential long-run benefits, but then changes occur in local decisions or state mandates so that resources spent earlier are effectively wasted. (p. 15)

changes that are necessary but not by themselves sufficient…reducing class size without sufficient training of teachers in new techniques. (p. 15)

And while the infusion of significant funding has the potential to improve disparate learning conditions, the evidence suggests urban school districts are ill-prepared to distribute instructional resources in a more predictable or equitable manner. Unfortunately, “the practice associated with translating revenues into effective resources requires special forms of planning, and neither schools nor districts are necessarily good at doing this” (Grubb, 2006, p. 15).

INTERDISTRICT SPENDING DISPARITIES

Legal scholars Augustina Reyes and Gloria Rodriguez (2004) assert that teachers and instruction are at the core of school finance litigation. The authors contend, “school finance reforms, produced by various court challenges, have increasingly brought attention to the classroom and the need to support strong teaching practices designed to interrupt patterns of educational inequity” (p. 4). Reyes & Rodriguez aptly observe that the underlying intent of school finance litigation “is to distribute more equitably, resources while productively using more school dollars to increase student performance in the face of increasing standards and shrinking state budgets” (2004, p. 17).

In the modern era of school reform, cash strapped urban districts are forced to do more with less. Consequently, it is imperative that these same districts learn how to distribute limited instructional resources in a more equitable manner if all students are expected to meet the same rigorous standards. However, Grubb (2006) find the effects of litigation upon disparate funding practices to be “distinctly mixed.” The author’s perspective on litigation’s shortcomings follows:
But the effects of litigation on the distribution of school resources—those goods and services, including well-prepared teachers and principals, that money might be able to buy and that might be effective in enhancing school outcomes—has been negligible, and the effects on schooling outcomes are completely absent. (Grubb, 2006, p. 3)

The “first wave” of education finance cases targeted disparities in public education funding at the state level (Reyes & Rodriguez, 2004, p. 5). In general, these interdistrict legal challenges sought to expose the connection between property taxes and instructional spending patterns across school districts. Unequal spending patterns were found in states that “relied almost exclusively on local property taxes” (p. 5) to support instruction at the district level.

Lower property values in urban and rural communities disproportionately harm students in these school districts. Suburban districts with higher property values spend more to support instruction in their local schools simply because they could. Consequently, “[t]he lowest property wealth districts were taxing themselves at extremely high rates to generate revenues for schools that pales in comparison to the revenues that much wealthier districts were able to generate with relatively minimal tax effort” (p. 5).

During the “second wave” of distributional court challenges, plaintiffs sought to correct the inherent disparities embedded in state funding schemes. Reyes & Rodriguez (2004, p. 5) find that this new era of litigation relied on the equal protection provisions of individual state constitutions as a means of providing equal educational dollars to all districts. The concept of fiscal neutrality was used during this time to make a case for balancing or equalizing instructional expenditures across districts. Fiscal neutrality is a policy based on the idea that “the quality of a child’s education should not be dependent on the level of local property values of his or her community” (Reyes & Rodriguez, 2004, p. 6).
**State Finance Litigation Falls Short**


Equalization policies like fiscal neutrality are essential to both understanding and addressing inherent inequities in the distribution of instructional resources. “[W]ithout equalization as a starting point, disparate school systems throughout the country would no doubt continue to offer variously situation students an inappropriately wide range of educational quality” (Reyes & Rodriguez, 2004, p. 6). However, disparities in local property tax revenue only reinforce the spending advantage of wealthier, mostly suburban school districts. In the absence of effective fiscal neutrality policies, interdistrict funding gaps will continue to plague property poor urban districts.

**Defining an Adequate Distribution of Resources**

Unlike previous equalization or equity approaches, the current wave of fiscal adequacy cases introduce real and complex issues for consideration. The potential for adequacy approaches to produce more equitable systems of resource distribution will ultimately be determined in how states define or conceptualize an adequate education (Reyes & Rodriguez, 2004, p. 7). “An adequacy standard is, in effect, not only a question of how much money is enough but more accurately a question of how much education is enough” (Reyes & Rodriguez, 2004, p. 8).
Of central concern is how the adequacy standards will be applied to inter- and intradistrict spending patterns. Critics fear adequacy standards will be defined in terms of a guaranteed minimum standard and thus fail to equalize disparate spending patterns (Grubb, 2006, p. 7). Though the adequacy standard can be considered an “advance over equalization because of its potential to link spending to outcomes, but in practice rarely does so” (Grubb, 2006, p. 8). At present, there is no universal adequacy standard nor definitive formula for redressing chronic, interdistrict spending disparities. Consequently, critical questions remain: “[W]hat data or research will be used to determine adequate resources for the regular education program in a cost-effective, ideally sized elementary, middle, or high school campus?” (Reyes & Rodriguez, 2004, p. 14-15).

RECOMMENDATIONS
Towards an Equitable Distribution of Instructional Resources

Teacher assignment practices are widely viewed as the foremost constraint to a more fair and equitable distribution of instructional resources. Intradistrict staffing and spending differences are driven by teacher transfers and hidden by ambiguous “resourcing” and budgeting policies. More accurately, disparate staffing patterns are responsible for disparate spending patterns. Staffing and spending patterns are inextricably linked. For this reason, “the average salary for all teachers at a given school reflects the school’s ability to hire teachers and thus can be related to teacher quality” (Roza & Hill, 2003, p. 10).

There is general consensus that teacher assignment practices have a significant, adverse impact on poor students of color. “If districts are to achieve greater equity, they need to understand the ways resources are currently allocated, which often shortchanges the students who need the most support” (Grady et al., 2004, p. 5). The literature clearly points to the need for targeted
instructional investments in “hard-to-staff” schools serving the greatest numbers of low income and minority students. Educational equity compels school districts to do more and spend more in disadvantaged schools to control for systemic inequities “wired into the system” (Roza & Hill, 3/7/2005).

Additionally, a more equitable distribution of instructional resources “does not imply equal dollars” (School Communities that Work, 2002c, p. 7) for all students in all schools. Rather, “any funding strategy that aims for equity across schools must address differences in student needs, school operating costs, and access to high-quality teachers” (School Communities that Work, 2000c, p. 7).

**EQUITABLE DISTRIBUTION OF INSTRUCTIONAL RESOURCES**

School districts must do more to increase the number of experienced, highly qualified teachers working in disadvantaged schools. “Teachers are the fundamental resource of public education. They do the work, they make the difference” (Education Trust, 2004, p. 11). Increasing poor and minority students’ access to high quality instruction is seen as essential to narrowing gaps in achievement and outcomes. School districts and teachers’ unions must first renegotiate existing assignment practices to improve working conditions in disadvantaged classrooms. The following improvements are generally regarded as making challenging placements more attractive:

*Increase Pay*

Replace single salary schedules with more dynamic compensation systems. “What we need is a system where teachers get paid the most money to work where the need is greatest. In other words, we need a system of reasonable tradeoffs between teacher compensation, autonomy, and the needs of students” (Education Trust, 2004, p. 19). Teachers committed to working in disadvantaged schools should receive higher salaries and similar financial incentives. For example, New York provided teachers with board certification
annual bonuses of $10,000 for three years; California uses a combination of loan forgiveness, housing vouchers and similar bonuses (Education Week 1/9/2003). Non-monetary incentives, like teaching sabbaticals and reductions in teaching load, are also recommended (Education Trust, 2000, p. 27). Districts are encouraged to “balance the challenge” and give teachers “more time with individual students, more time to collaborate with colleagues and more time for coaching and induction” (Education Trust, 2006, p. 14).

**Eliminate Transfer Provisions**

Replace seniority transfer rights with “policies guaranteeing a fair distribution of teachers” (Education Trust, 2000, p. 27). Some urban districts actually prohibit the placement of unqualified and inexperienced teachers in disadvantaged schools (Education Week 1/9/2003). In addition, “put high-poverty, struggling schools at the head of the hiring line, allowing them to have the first pick of teaching talent” (Education Trust, 2006, p. 13).

**Enhance School Leadership**

Stabilize learning communities by placing effective principal leaders in high need schools. “Supportive, collaborative principals are hugely important to attracting and hold strong teachers in high-poverty schools” (Education Trust, 2006, p. 14). Principals should receive financial incentives, like increased pay, for working in disadvantaged schools. Districts are encouraged to leave school leaders “in place for at least five to seven years” (Education Trust, 2000, p. 27) to build cohesive instructional teams.

**Identifying Effective Teachers**

A small number of school districts and research institutes are using sophisticated data management systems to identify the most effective teachers. Sanders & Rivers’ (1996) seminal work in the field of value-added assessment (TVAAS) demonstrates that “the single dominant factor affecting student
achievement gain is teacher effect” (p. 6). The researchers’ longitudinal analysis of “academic gain patterns” found:

Regardless of initial achievement level, teachers in the top quintile facilitated desirable academic progress for all students…As the teacher effectiveness quintile increased, lower achieving students were first to benefit…(p.7)

Students benefiting from regular yearly assignment to more effective teachers (even if by chance) have an extreme advantage in terms of attaining higher levels of achievement. The range of approximately 50 percentile points in student mathematics achievement as measured in this study is awesome!!! Differences of this magnitude could determine future assignments of remedial versus accelerated courses. (p.7)

Kevin Carey (Education Trust, 2004) highlights recent and promising efforts to use value-added data to bolster student performance in disadvantaged schools. To enhance the quality of instruction, school districts are encouraged to:

Use value-added data as a central part of recruitment, hiring, compensation and performance evaluations of teachers. (p.34)

Make doubly sure that low-performing students get effective teachers. [Effective teachers should receive] incentives, professional recognition, differential pay or working conditions commensurate with the job, for example, by lessening the student load for teachers who work with struggling students. (p. 34)

Improve the effectiveness of the current teacher workforce by providing time and resources for ongoing professional development informed by value-added data and teacher effectiveness research. (p. 35)

Use value-added data as a component in plans to help ineffective teachers become better and as part of the process for fairly, but absolutely, removing persistently ineffective teachers from the classroom. (p. 35)

For teacher unions: allow teacher effectiveness to outweigh seniority in staffing decisions. (p. 35)

The logistical and organizational challenges involved in the ongoing collection and assessment of value-added teacher data is beyond the scope of this paper. However, an empirically-based approach would school districts with more objective and meaningful data to assist in matching the best teachers with the most needy students.
**Performance-Based Pay**

A value-added assessment process could be augmented by a system of performance-based pay. “Evidence shows that a well-designed system of teacher pay serves students better than a simplistic seniority-based system.” (Progressive Policy Institute, 2005, p. 12). Longitudinal data collection should “focus not at the levels of students’ test scores, but on the change in scores” (p. 12).

**Eliminate “Resourcing” Practices**

Staff-based allocation practices give high performing, low poverty schools unfair spending advantages (Roza, Miller & Hill, 2005, p. 12). Districts should report actual instructional spending at the school-level and replace misleading budgeting practices like salary averaging. At present, Oakland is the only district to “charge actual salaries to schools” (School Communities that Work, 2002c, p. 7). “[M]ore open funding and accounting practices can help re-sort the most capable teachers so that schools serving poor student can become better staffed” (Roza & Hill, 2003, p. 4).

**Money Follows the Student**

Student-based budgeting practices seek to connect instructional investments with student needs. “Matching funding to the specific needs of students provides greater flexibility and equity at the school level” (School Communities that Work, 2002c, p. 44). Under a student weighted funding formula, “the only differences in school funding were those driven by student need” (Miles, Ware & Roza, 2003, p. 115). This fundamental shift in budgeting practices promises to “equalize schools’ ability to purchase quality teaching resources” (School Communities that Work, 2002a, p. 32) because the “money follows the student,” not the teacher.
Roza & Hill (2003) further describe the connection between student-weights and education equity as follows:

States could fund children, not teachers or other goods and services. If states made it clear that dollars were generated by children, and should follow children to the schools in which they enroll, they could then demand that districts report real-dollar-per-pupil funding, and explain any situations in which dollars intended for poor or disadvantaged students are spent on others. (p. 25) The experiences of districts in Cincinnati, Houston and Seattle demonstrate that student-based practices increase instructional resource capacity in disadvantaged schools. Student-weights actually increase per-pupil spending in high poverty schools because students in these schools have the greatest learning needs. This model also gives individual schools greater discretion in how instructional dollars are spend to best meet student needs.

Grady, Foley & Barnes (2004) also believe the move towards student-based budgeting and decentralization can increase educational equity—both in terms of access and outcomes—for disadvantaged student groups. Unlike traditional funding schemes, student-based budgeting attempts to match fund allocations with student needs. Instructional dollars actually follow the student to her or his school site. In turn, schools are given the autonomy to decide how best to spend these funds in light of student needs. The authors point to the successful implementation of such systems in the Cincinnati, Milwaukee and Houston school districts:

In all three districts, there are now more dollars in school-site budgets, and there is more spending flexibility at the school level. All the districts report more discussion as school sites on what activities and staffing positions add value to student learning and make staffing decisions based on these considerations. (Grady et al., p. 6)

Student-based budgeting and decentralized decision making are seen as a marked departure from “one-size-fits-all supports for schools” like standardized curricula and professional development training (Grady et al., p. 6).
Decentralize Spending Decisions

Reyes & Rodriguez favor the decentralization of budgetary decisions to the individual school level. The authors define decentralization as follows:

Decentralization proposes to restructure bureaucratically centralized school systems by redistributing decision-making authority and funds to the local campus. Decentralization promotes the...devolution of management, budgeting, curriculum, and instruction to the school site. Decentralization is accomplished by redistributing traditionally centralized authority to those closest to the decisions, thus making schools more efficient... (Reyes & Rodriguez, 2004, p. 12).

The move towards school-based decision making, especially around instructional spending, is a radical departure from the increasing centralized authority of the modern school reform era. In essence, the authors argue that schools should be given autonomy to use instructional resources to best meet the learning needs of its student body. “Decentralized budgeting, or campus-based budgeting, allows instruction to drive the school budget rather than the central office” (Reyes & Rodriguez, 2004, p. 16).

Much like the adequacy standard, however, the logistical challenges in transferring budgetary authority to the school level are enormous. As the authors note, “there is little evidence of successful decentralization models” (Reyes & Rodriguez, 2004, p. 17). Moreover, decentralization may further complicate the bureaucratic inefficiencies of large districts. The authors cite a study by Hess (2001) that found, “In practice, decentralization may become recentralization at a lower tier of district organization” (Reyes & Rodriguez, 2004, p. 12).

Despite its ambiguity (theory versus practical implementation), the movement toward decentralization and student based budgeting shows promise for enhancing instruction in disadvantaged neighborhood schools. Reyes & Rodriguez quote the findings from a 1997 study conducted by Miles and Darling-Hammond that found decentralized funding decisions at the school level can lift
student achievement. The following “allocation strategies” are considered effective:

- Increase the number of regular classroom teachers and reduce class size (core education services) by trading out expensive positions for regular classroom teacher positions.
- Provide varied class sizes for different participants, such as eight students per reading class.
- Group students differently from traditional age-grade groups.
- Expand common teacher planning periods to give teachers more time to plan as instructional teams.
- Increase teacher professional development. (Reyes & Rodriguez, p. 15-16).

Reyes & Rodriguez note that decentralization efforts must “provide a link between instruction and school budgeting [decisions] to improve instruction and student achievement and to hold schools accountable for student performance” (2004, p. 14). From an equity standpoint, the underlying goal of the transfer of budgetary authority to the school level is to improve learning outcomes for disadvantaged students (Reyes & Rodriguez, 2004, p. 18).
CHAPTER 3: PHILADELPHIA CONTEXT

EDUCATION REFORM in PHILADELPHIA

There are significant milestones in the School District of Philadelphia’s (District) modern reform movement. Generally speaking, the District “is severely challenged by racial segregation, under-funding, and a rising rate of concentrated poverty” (RFA, 2005, p. 18). Though far from exhaustive, the following reform timeline provides an overview of significant events surrounding the state takeover of the District. Selected events depict an urban district in crisis. In addition, these milestones have affected the distribution of instructional resources—both teachers and per pupil expenditures—across schools in the District. We encourage you to explore the source documents referenced below for a more in-depth discussion of the District’s organizational challenges and opportunities.

1993 – State Freezes Funding Formula: “The Pennsylvania legislature voted to freeze the state’s funding formula so that state allocations for districts no longer increased in response to increased enrollment, proportion of students with special needs, or ability to raise local taxes” (RFA, 2003, p. 1). The legislature advanced the argument that “giving more money to districts that have not used it effectively in the past would be misguided” (RFA, 2003, p. 4).

1994 - Segregated Neighborhood Schools: In the case of PA HRC v. School District of Philadelphia, Commonwealth Court finds significant staffing disparities within the District’s racially isolated schools. Judge Smith-Ribner concludes:

The least experienced teachers are employed in racially isolated minority schools which face the highest rate of teacher turnover; the best qualified of the newly hired teachers work in white or desegregated schools…and the most experienced teachers generally work in the northwest or northeast areas…High teacher turnover in racially isolated minority schools has existed within the School District for many years yet no system-wide mandates are in place to correct this condition. (ELC, March 2004, p. 8)\textsuperscript{12}

\textsuperscript{12} In 2002-2003, only 28 of the District’s 134 most segregated schools (identified in 1994) met AYP targets. (Philadelphia Public School Notebook, Summer 2004a).
**Decision Overturned by High Court:** Though Judge Smith-Ribner called for reductions in class size, increased parental involvement and more experienced teachers for Philadelphia’s segregated schools, the State Supreme Court refused to uphold portions of her order. This reversal by the Commonwealth’s highest court severely constrained the District’s ability to improve educational outcomes for all students in Philadelphia. (Philadelphia Public School Notebook, Summer 2004a)


“Even though the city’s local tax rate is essentially double that of surrounding counties, property values in Philadelphia are so low that the District was not able to compensate for the loss of state funds” (RFA, 2003, p. 1).

**1998 – Powel v Ridge:** “[C]ity leaders filed a federal civil rights suit contending the state’s practices discriminate against school districts with large numbers of non-white students. (RFA, 2003, p. 1).

**Act 46:** In response to mounting budget deficits (in excess of $200 million) and Superintendent Hornbeck’s threat to adopt an unbalanced budget in absence of sufficient state funds, the Commonwealth passed Act 46 “which allows the state to take control of financially troubled school districts” (RFA, 2003, p. 1).

**Shifting Balance of Power:** Act 46, or the state takeover legislation, places “real power” in the hands of a CEO, and replaces the School Board with a five-member School Reform Commission (SRC). SRC is given broad power to act unilaterally in contract negotiations with the teachers union. Teachers who go on strike may face loss of certification and employment. (Committee of 70, 2000).

In passing Act 46, the state legislature amended the Pennsylvania State Code to give the SRC “sweeping powers to change district policies and procedures (Useem/RFA, 2005, p. 3).

**2000 – Education Empowerment Act:** Passage of Act 16 further refines the Commonwealth’s takeover legislation, targeting 11 school districts in total with low levels of academic achievement. (RFA, 2002)

**December 2001 – State Takeover Begins:** Essentially, Mayor Street is given three choices “continue to go from crisis to crisis; endure hostile takeover, or form a partnership with the state to change the ways schools are run” (Committee of 70, 2000). Street negotiates a ‘friendly’ state takeover and
the City agrees to drop *Powel v Ridge*, “with the promise of additional funding from the state” (RFA, 2003, p. 1).

**2002 – Diverse Provider Model:** “A majority of SRC members voted in the spring of 2002 to implement a complex ‘diverse provider model,’ one that reflected former Governors Tom Ridge and Mark Schweiker’s faith in the ability of market forces to reinvigorate public education” (RFA, 2005, p. 4).

Diverse providers, or educational management organizations (EMO), are awarded extra per-pupil funding. Vallas proposes “a five-year financial plan…coupled with a rigorous search for unused and mismanaged funds, which he anticipated would save the District several million dollars annually” (RFA, 2003, p. 3).

“In all, 86 of the district's lowest-performing elementary and middle schools were assigned to an intervention of some sort” (RFA, 2005, p. 4), assigned to either an EMO or special District region. EMO contracts are set to expire in 2007 (p. 10).

**2003 – Campaign for Human Capital:** Convened in November 2002 by CEO Vallas, Campaign releases final report in February 2003 with a broad range of recommendations to address Philadelphia’s “teacher crisis.” Report focus is “improving teacher quality…for the simple reason that no other single variable is more closely associated with student achievement.” (CHC, 2003, p. 3)

**Recognition of Staffing Disparities:** Campaign acknowledges chronic teacher turnover: “We have a revolving door through which 32% of our new teachers leave within three years and 40% leave within five years.” (CHC, 2003, p. 5) Equity is one of Campaign’s guiding principles, noting “We must stop placing the least qualified teachers in the lowest performing schools.” (CHC, 2003, p. 6)

**Defining Core Competencies:** Campaign approaches “teacher recruitment, selection, development and retention through the lens of a competency profile which identifies the qualities of successful teachers in the Philadelphia public schools.” (CHC, 2003, p. 9) The ten “characteristics correlated with success in urban schools” are: “flexibility, resourcefulness, persistence, team orientation, empathy, understanding and respect for differences, comfort in the urban milieu, communication skill, passion for teaching, [and] commitment to the urban community” (CHC, 2003, p. 10).

**Professional Environment:** Survey of some 8,100 public school teachers in the District reveals principals, mentor teachers and small learning communities contribute to teacher success. (CHC, 2003, p. 15) Teachers assert “principals, student behavior and lack of administrative support” are barriers to success. Teachers express support for improvements such as
“reduced class size, assistance with paperwork, improved facilities, swifter discipline, and textbooks and materials.” (CHC, 2003, p. 16)

**Change Hiring Practices:** Campaign endorses implementation of the following enhancements: “(a) Change the hiring timetable to make Philadelphia competitive with suburban districts and charters; (b) Make passing the general knowledge portion of the PRAXIS teacher examination a part of the hiring process to weed out candidates with weak basic reading, writing and math skills; (c) Give priority to hiring candidates who successfully completed their student teaching in Philadelphia and who elect to teach in a hard to staff school…; [and] (d) Implement an on-line system to facilitate multiple functions including application tracking, resume collection, and candidate notification.” (CHC, 2003, p. 17)

**Change Allocation Process:** Modify process “to permit ‘over hiring’ in schools with high absenteeism, high turnover and large numbers of new teachers so that novice and uncertified teachers can have smaller classes and more time for professional development.” The Campaign also advocates the expansion of site selection to all schools in the District. (CHC, 2003, p. 17)

**2004 – Collective Bargaining Agreement:** The 2004-2008 teachers’ contract was ratified on October 15, 2004. Teacher assignment practices were the defining issue of the contract talks. The District and the Philadelphia Federation of Teachers (PFT) literally split the difference between their opposing positions on teacher assignment. The District advanced site selection (increased autonomy for principals) and PFT sought to protect seniority transfer rights. The 2004-2008 collective bargaining agreement stipulates:

- Half of all teacher vacancies will be filled through site selection.
- All new hires and retired teachers returning to service will be subject to site selection.
- Transition schools (where middle school becomes high school) will use site selection during transition year.
- Five “hard-to-staff” middle schools will participate in a two-year site selection pilot.
- All newly built schools will use site selection for two years.
- Teachers working in one of 25 Incentive Schools will receive $2,400 tuition reimbursement or three personal days. Goal is to reduce class size in these schools.
- Teachers will get 3% annual salary increase in ’05, ’07, and ’08; 3% bonus in December 2005; and 1% bonus in ’06 and ’07.
- At least one counselor will be hired at each school.
- Classroom supply budget increased to $100/class.
**2005 – Declaration of Education:** SRC publishes formal declaration of beliefs and goals guiding districtwide reform efforts.

*We believe all children can learn at high levels.*

*We believe all children can reach their learning potential and that the achievement gap can be eliminated.* The District “must provide equal access to quality education regardless of race, family income, gender, native language, special needs or area of residence. Providing equal access to high quality education for every child may require the investment of unequal resources to ensure an equitable outcome.

**Equity Goals**

100% of schools will have equity in facilities, programs and resources.

100% of all high schools will offer honors and Advanced Placement courses.

100% of District teachers and para-professionals will be highly qualified in their positions.

All Philadelphia students will have access to school choice options that include high quality public, privately managed and charter schools.

*We believe schools have an enormous impact on children’s lives.* “To improve educational outcomes for all students, a qualified teacher must be in every classroom, and every school must have a qualified principal who is an instructional leader.”

*We believe the…District…can become a high performing organization.*

*We believe that all children should be educated in a safe and orderly environment.*

**DISTRIBUTION of DISTRICT TEACHERS**

*Poor students of color short-staffed.*

Disparities in the distribution of experienced teachers within the School District of Philadelphia (District) are well documented. Staffing studies conducted by local research and advocacy groups like the Education Law Center of Pennsylvania (ELC) and Research for Action (RFA) clearly show that poor and 

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13 SRC also developed benchmarks under the areas of Early Literacy, Academic Achievement, Safe and Orderly Environment, Community Collaboration and Efficient and Effective Support Services.
minority students alike are denied equal access to experienced teachers and quality instruction. Consistent with national trends, systemic inequities are embedded in the District’s process of teacher assignment.

The distribution of teacher experience across schools is biased by student poverty and race indicating that schools serving high proportions of African American, Latino and poor students do not have equal access to high quality instructional resources. Local staffing studies suggest high rates of faculty instability and turnover undermine student performance in high poverty, high minority schools. The following section explores significant findings on disparate staffing patterns between schools in the District.

**UNEQUAL STAFFING PATTERNS**

*Transfers Create Staffing Instability*

Teacher transfer patterns within the District negatively affect faculty stability in high poverty, high minority schools. In other words, teacher assignment as implemented through seniority transfers disproportionately favors high performing schools in more affluent neighborhoods. In their review of teacher mobility data from 1991-1998, Chester, Offenberg & Xu (1999) found “‘teacher transfers in Philadelphia result in fewer experienced teachers and higher faculty instability in the schools that serve the poorest, most minority, and lowest achieving students’” (ELC, 2004, p. 9).

*“Underqualified” Teachers*

Research for Action’s (2003) review of district staffing data confirms that teacher mobility trends have an adverse and unfair affect on poor students of color. “‘The general pattern is for teachers to transfer from higher-poverty schools to those with lower-poverty. The longer a teacher is employed by the system, the more opportunities arise to transfer to a lower-poverty school’” (ELC, 2004, p. 15). RFA (2003) describes the “problem of underqualified teachers” as follows:
Declining Certification Rates: About half of new teachers hired in 2002-2003 were fully certified. (p. 2)

Poor Test Performance: Emergency-certified teachers performed poorly on Commonwealth licensure exams. (p. 2)

High Attrition Rates: From 1999-2003, some 25% of teachers left the District. More than half of new teachers left the District after 3 years. (p. 2)

Unstable Staffing: Between 1999 and 2003, only 64% of teachers remained in the same school. By comparison, less than half of teachers stayed in the highest-poverty schools. (p. 2)

Disparate Staffing Patterns: In 2003, only 83% of teachers in schools with the highest concentration of low income students were certified compared with 92% of teachers in more affluent neighborhoods. (p. 4)

RFA's analysis of teacher mobility data “paints a disturbing picture of teacher attrition, reliance on lesser-qualified teachers, and inequities in the assignment of qualified teachers to schools with large percentages of low income students” (2003, p. 8). Higher starting salaries in suburban counties, bureaucratic inefficiencies in the hiring process and “rocking induction” experiences were all cities as push factors for new teachers in the District (RFA, 2003, pp. 6-7).

Teacher Assignment Practices Cause Staffing Disparities

Teacher assignment policies are at the core of inequitable staffing patterns in the District. In practice, teachers use their seniority privilege to transfer to preferred positions in high performing, more affluent neighborhood schools. Overtime, the net result of teacher choices is the over concentration of novice, inexperienced teachers in schools with arguably the greatest learning needs. To put it another way, the collective expression of teacher choices effectively limits equal access to the District’s most qualified teachers.

A companion study released by RFA in 2005 provides additional insight on the District’s efforts to recruit and retain new teacher talent in economically disadvantaged neighborhood schools. While the District introduced an array of initiatives to increase the pool of qualified new teachers, high rates of attrition remain. The data indicate that disparate staffing patterns continue to plague
schools with the highest concentrations of impoverished students. The report authors note that schools in economically depressed neighborhoods have insufficient numbers of experienced and certified teachers (RFA, 2005, p. 2).

RFA also observed an overall trend towards using alternatively certified teachers to fill vacancies in hard to staff subjects and grades (RFA, 2005, p. 2). There appears to be an over dependence on such teachers to meet “highly qualified teacher requirements” mandated by NCLB (p. 14). The following information on teacher qualifications was retrieved from the District’s Office of School Management, Title I Office website. Qualifications are also listed for para-professionals, like classroom assistants, working in the District.

The No Child Left Behind Act of 2001 requires that teachers must be highly qualified by no later than the end of the 2005-2006 school year. The requirements to be highly qualified are as follows: Bachelors Degree, and State Certified, and Passed rigorous state test (Praxis).

Within the District, the distribution of “underqualified” teachers has genuine socioeconomic implications. Disparities in access to fully certified and experienced teachers disproportionately affect schools serving poor students (p. 7). Finally, pass rates and overall performance on state licensing exams among veteran and novice teachers alike are considered “discouraging” (p. 6).

**EXPLORATION of TEACHER ASSIGNMENT**

*Poor Students of Color Short-Staffed*

In March 2004, the Education Law Center of Pennsylvania (ELC) filed a federal complaint with the US Department of Education’s Office of Civil Rights. In the complaint, ELC alleges that teacher assignment practices in the School District of Philadelphia disproportionately affect disadvantaged neighborhood schools. The central issue of the complaint is student “access to experienced teachers” (ELC, 2004, p. 2).
The ELC complaint speaks to the inherent elusiveness of equal opportunity for minority and poor students alike and the persistence of segregated schooling in urban America. ELC summarizes the staffing challenges facing the District as follows:

However, Philadelphia schools are not all created equal, and the students at issue in this complaint find themselves at a double disadvantage. That disadvantage lies in the fact that qualified and skilled teachers—the most crucial ‘input’ in the District’s instructional program—are inequitably distributed within the system, with more qualified, more experienced teachers going to the city’s lower-minority, lower-poverty schools. (ELC, March 2004, p. 1)

The “double disadvantage” facing poor students of color refers to the unequal distribution of veteran teachers both across the Commonwealth and within the District itself.

The inequitable distribution of experienced teachers across schools in the District is well documented. In its OCR complaint, ELC uses recent empirical studies on the distribution of teacher experience to substantiate claims of separate and unequal schooling conditions for minority and low income students in Philadelphia. While teacher experience does not guarantee teacher effectiveness in the classroom, it is the only objective measure of teacher qualifications. In fact, teacher experience—a combination of educational training and classroom experience—is used in determinations of highly qualified instructors under No Child Left Behind.

The relationship between teacher experience and student outcomes is subject to ongoing debate in the literature. As ELC notes, “We recognize that certification and experience do not, in every case, correlate with good teaching” (2004, p. 2). In general, a wide range of school, neighborhood and family factors influence student learning. Moreover, teacher experience (input variable) and student test scores (output variable) are imperfect measures of teacher effectiveness and learning gains.
Despite its empirical uncertainty, however, teacher experience assumes a critical role in the distribution of instructional resources. As ELC’s legal complaint details, teacher experience not only determines where individual teachers teach, but how much money is spent per school to support instruction. In other words, unequal staffing patterns create unequal spending patterns between schools in the District.

**TEACHER EXPERIENCE AFFECTS STAFFING PATTERNS**

In the Analysis Section of their complaint, ELC demonstrates how Philadelphia’s “teacher assignment practices have a disproportionate, adverse impact on students of color and poor students” (ELC, 2004, p. 6). The process of assigning individual teachers to individual schools is governed by the collective bargaining agreement between the Philadelphia Federation of Teachers (PFT) and the District (ELC, 2004, p. 6).14

**Seniority & Autonomy**

Under the seniority system, teacher experience assumes a central role in the assignment process. A teacher gains seniority privileges in direct proportion to their years teaching experience in the District. “As the teacher acquires seniority, the teacher gains more and more control over where he or she will teach” (p. 7). In essence, seniority systems reward teacher longevity in the District.

Teacher autonomy in the assignment process is determined by seniority ranking. Basically, “teachers with greater seniority have a greater chance of transferring to the schools of their choice” (ELC, 2004, p. 7). In the context of teacher assignment, seniority privileges apply exclusively to within District transfers. That is, “teachers gain increasing control over their assignment within the system as their seniority increases” (ELC, 2004, p. 8). In most cases, a

14 ELC’s complaint was issued prior to the ratification of the 2004-2008 collective bargaining agreement.
vacated teaching position will be awarded to the teacher with the highest seniority ranking.

**Teacher Assignment Creates Unequal Staffing Patterns**

The OCR complaint asserts that the District’s teacher assignment practices are primarily responsible for the uneven distribution of teacher experience between schools (ELC, 2004, p. 8). ELC contends the use of seniority transfers to fill vacated teaching positions exacerbates staffing inequities in schools serving the highest concentrations of poor students of color. Previous staffing studies confirm that these schools have “higher numbers of uncertified teachers, higher numbers of inexperienced teachers, and higher turnover” (ELC, 2004, p. 8).

**TEACHER EXPERIENCE & SPENDING PATTERNS**

The relationship between teacher experience and instructional spending patterns is more direct, though not widely understood. Teacher experience—both educational and instructional experience—are used to determine levels of compensation. Also know as a single salary schedule, this compensation system ensures that teachers with equal levels of experience receive the same salary. For this reason, average teacher salaries are much higher in schools with higher concentrations of teacher experience. In turn, schools employing more experienced, higher salaried teachers spend more money to support instruction.

The unequal distribution of experienced teachers in the District both causes and perpetuates unequal spending patterns. The District allocates funds, or instructional dollars, to individual schools based on the sum of teacher salaries at that school. Thus, disparities in teacher experience predict disparities in instructional spending. “Since on average, the teachers at schools with higher numbers of white students are more experienced, the amounts spent on teacher salaries in these schools is greater. By contrast, in high-minority schools, less money is allocated for teacher salaries” (ELC, 2004, p. 2).
**Misleading Budgetary Practices**

Separate and unequal spending patterns within the District are largely obscured by misleading budgetary practices. As ELC notes, spending inequities are “masked by a budgetary fiction in use in the District: in calculating the teacher salary component of each school’s budget, the District uses an average salary figure rather than the actual amounts paid to the teachers in that school” (ELC, 2004, p. 2, footnote). The use of a districtwide average salary figure on school budgets does not reflect real spending at the school level.

Surprisingly, this form of “budgetary fiction” is actually permitted under the federal government’s Title I program. Citing a 2005 study completed by the Center for Reinventing Public Education (CRPE), David Hoff reports, a “clause in the federal…law allows districts to engage in a form of accounting—using the average of all teacher salaries districtwide in determining how a district is reimbursed from its Title I grant—that has the effect of redistributing federal aid away from the neediest schools” (*Ed Week*, 08/31/05). The logic is as follows:

Districts are not required to charge the federal program for the actual cost of teacher salaries in Title I schools…The difference between the amount charged to Title I and what the teachers are actually paid doesn’t benefit the Title I schools, however. Rather, that money may indirectly subsidize the salaries of the frequently higher-paid teachers in non-Title I schools…(*Ed Week*, 08/31/05)

The money saved on teacher salaries in disadvantaged schools is used to support instruction for ineligible students in more affluent schools. However, the combination of opaque budgeting procedures and the relative size of urban districts makes it virtually impossible to account for how Title I funds are spent. At present, there is no mechanism to restore unspent salary dollars to disadvantaged schools.

**Assignment Practices Educationally Unnecessary**

In sum, ELC maintains that teacher assignment practices effectively deny all students equal access to experienced teachers. The empirical evidence ELC uses in its complaint on teacher staffing patterns is conclusive—schools in high poverty, high minority neighborhoods continue to face significant and disparate
ELC contends that since federal and state governments recognize “certification is a prerequisite for a highly qualified public school teacher,” student access to a certified teachers can be interpreted as a ‘benefit’ under Title VI of the Civil Rights Act of 1964. (ELC, 2004, p. 2). Extending the educational benefit logic to issues of “teacher experience, faculty stability, and funding for teacher salaries” ELC argues that “the District is in violation of Title VI” (ELC, 2004, p. 2).

ELC argues that the extent of disparate staffing conditions in the District satisfies OCR’s three-part test of “intradistrict school resource comparability” (ELC, 2004, p. 4), making “a prima facie case under Title VI” (p. 19). The following list summarizes ELC’s interpretation of unequal access to staffing “benefits”:

**Certified Teachers:** Certification requirements are, by definition, Pennsylvania’s minimum competency requirements for public school teachers. If, as is the case in Philadelphia, students of color are disproportionately taught by uncertified teachers, those students are being denied a benefit—minimally qualified teachers—extended to others. (p. 19)

**Teacher Experience:** The research indicates that inexperienced teachers tend to be less effective than more experienced teachers, at least up to the five-year mark. Accordingly, at least as a general rule, students who are instructed by inexperienced teachers are at a disadvantage as compared to peers whose teachers do have experience. (p. 19)

**Faculty Turnover:** It seems self-evident that high levels of faculty instability make it difficult to operate an effective school. The District’s own 1999 study takes exactly that view: Teacher turnover and faculty instability impedes school effectiveness by diminishing organizational continuity compromising the quality of the teaching force…Higher turnover rates are associated with lower school achievement. (p. 19-20)

**Salaries:** Having additional dollars for teacher salaries is a benefit…This is not to say that, in any specific case, a higher salary translates into better teaching…when less money is made available for teacher salaries for African-American and Latino students, those children have less opportunity to be taught by experienced teachers. (p. 20)
ELC concludes that the District’s teacher assignment system, as implemented through seniority transfer, is not educationally necessary under Title VI. “We think it is unlikely that the District can show that the current system, under which most teacher movement is governed by teacher choice and seniority rules, is—in its entirety—educationally necessary” (ELC, 2004, p. 21).

**DISTRIBUTION OF STATE FUNDS**

In its policy brief, “Nuts and Bolts of Public School Funding in Pennsylvania” (2006), the Education Law Center (ELC) of Pennsylvania explores the contours of the Commonwealth’s interdistrict funding disparities. We find their review of historic funding decisions and discussion of how schools are funded warrant further exploration. We will begin with an overview of the state’s legalized gambling legislation (Act 72) and summarize accountability block grants and the role of property taxes. We encourage you to read this document for yourself towards a greater understanding of opportunities and challenges.

**Act 72 – Legalized Gambling Legislation**

In its summary of Act 72, ELC uncovers the myriad challenges facing school districts across the state. We highlight the following issues as they are particularly instructive. First, “any gaming money received by a participating district must be used to reduce property taxes, not improve the schools” (ELC, 2006, p 3). In theory, this policy would be more advantageous for growing school districts in suburban counties and cash strapped districts in urban and rural communities. However, these same districts must simultaneously increase local income taxes (ELC, 2006, p 4), in an attempt to compensate for overall reductions in property taxation rates.

Special Session House Bill 39 (signed into law as Act 1), requiring all school districts to participate in Act 72” (ELC, 2006, p. 4). While compromises produced “flexibility for some of the local tax requirements” and “additional property tax for senior citizens,” the overall financial and social costs and benefits of gambling upon communities, let alone districts and individual schools, remains to be seen. Nevertheless, districts from Philadelphia to Pittsburgh to Altoona will be forced to weigh tax increases against property tax reductions and uncertain gaming revenues (ELC, 2006, p. 3).

*Education Accountability Block Grants*

In school year 2004-2005, this new program distributed some $200 million to school districts statewide for pre-approved, effective programs “such as pre-school and kindergarten, small classes, tutoring, and teacher training” (ELC, 2006, p 4). While grant funds are intended for districts with the greatest needs, “the amount of funding is modest, representing just over 1% of the cost of public education in Pennsylvania” (ELC, 2006, p. 4). The latest appropriation is not expected “to make a significant difference in closing opportunity deficits” separating district within the Commonwealth (ELC, 2006, p. 4).

*Property Taxes, An Interdistrict Perspective*

Perhaps the single greatest challenge to a more equitable distribution of instructional dollars in Pennsylvania is an over reliance on local property taxes to support local education. “The amount of local taxes that can be raised to support the schools depends on the value of the property in the district. This means that…children who live in communities with lower property values are at a disadvantage” (ELC, 2006, p. 5). While state funds can help “smooth out the effects of district wealth and poverty,” the Commonwealth “is unusual, because its state share is so small (ELC, 2006, p. 6).” ELC concludes its survey of Pennsylvania’s public education finance issues with a 2002 campaign quote from Governor Rendell that is worth repeating here as well:
School districts across Pennsylvania are chronically under-funded, forcing them to choose between cutting important programs and raising local taxes. The state’s funding inequities—among the worst in the nation—mean that where you live determines the quality of education your child receives…” (ELC, 2006, p. 6).

**Pennsylvania’s Interdistrict Funding Grade, 1999-2005**

We reviewed the “Quality Counts Reports” for a national perspective on interdistrict spending patterns in the Commonwealth. The analyses and reports are completed by Education Week in collaboration with the Pew Charitable Trusts of Philadelphia. The measure Resources/Funding Equity “examines the relationship between district wealth and education revenue and the disparities in funding across districts within a state.” From 1999-2005, Pennsylvania received the following grades in terms of its interdistrict funding equity:

- 1999: C-
- 2000: C-
- 2001: D-
- 2002: D-
- 2003: D-
- 2004: D-
- 2005: C-

To put these grades in perspective, in 2005, only eight states scored lower than Pennsylvania. In the 2005 report, “No Small Change: Targeting Money Toward Student Performance,” the report authors note that in Pennsylvania, “wealthier districts tend to receive significantly more state and local revenue than property-poor ones do.” (p. 130)

**RECOMMENDATIONS**

*Towards an Equitable Distribution of Instructional Resources*

**Use Incentives to Improve Working Conditions**

Research for Democracy’s focus on issues of teacher quality and effectiveness stems from our past work to bring parent and teacher voices into local and national discussions of urban school reform. In 2002, RFD conducted a random survey of over 1,000 parents and 350 teachers about their ideas for improving working conditions and learning experiences. The results of this study were published in “A Right to Know: A Parent-Teacher Strategy to Improve Teaching and Learning in the Philadelphia Public Schools.”
After this report was released, EPOP successfully partnered with the District to launch a new parent communication strategy. Components of the communication program include: standard report card format for every school, student progress reports and a voice mail system to enhance home-school communications. Working together with parents and teachers, we identified three policy levers to help move the District towards a more equal distribution of experienced teachers:

Provide financial incentives to disadvantaged neighborhood schools to improve staffing. Incentives might be used to reduce class size and increase professional development opportunities. Such incentives might also off-set intradistrict spending disparities caused by the overbalance of experienced teachers in certain schools.

Provide financial incentives and classroom resources to experienced teachers working in low income neighborhood schools. Efforts must be made to retain senior teachers in low performing schools, especially those with high rates of teacher turnover. Such teachers can assist newer, inexperienced teachers perfect the art of instruction and student engagement.

Change teacher assignment practices (seniority system) so that individual schools have the ability to interview and hire new teachers. This will allow principals to assemble cohesive instructional faculty to better meet student learning needs. Teachers will also have the opportunity to build rapport and learn from one another.

**Enhance Staffing Capacity**

The Teacher Equity Campaign was initiated in 2004 “to influence the course of the Philadelphia teacher’s contract, which has been under negotiation behind closed doors.” (Education Week, 4/28/2004). The Teacher Equity platform was endorsed by over 30 community and civic groups who felt that teachers, parents and students should be represented on the site-based selection teams. The Campaign recommended that the following benefits be extended to “hard-to-staff” (racially isolated) schools:

- Higher salaries for teachers
- More teacher coaches and mentors
- Smaller class sizes
- Additional money for supplies and materials
- Cadre of permanent substitute teachers
Best principals
Cap on the number of emergency certified and inexperienced teachers
Cap on the number of experienced teachers
Programs to support paraprofessionals and community residents become teachers
Involve students and parents in planning professional development trainings for teachers

**Change Assignment and Budgeting Practices**

ELC believes the District should pursue targeted strategies for reducing the disparate impacts associated with limited access to qualified teachers (2004, p. 22). The following list details ELC’s recommended improvements to the existing assignment system:

**Incentives**
Develop a program of effective incentives aimed at attracting certified and experienced teachers to, and retaining them in, high-poverty, high-minority schools. These could include financial as well as other incentives, such as special mentoring and professional development opportunities, smaller class sizes, and other supports. (p. 22)

**Site-based Selection**
Site selection may help make the school more attractive to teachers seeking positions. Site selection also allows a school to reject less qualified applicants (although, admittedly, that option is useful only if there are more qualified applicants in the pool). (p. 22)

**Transfer Rules**
Through its collective bargaining agreement, modify its transfer rules, e.g., by not allowing transfers that would result in a school’s having more than its fair share of uncertified and inexperienced teachers; and/or by limiting the numbers of transfers into or out of a school in any one year.” (p. 22)

**Budgeting**
Budget differently, allocating a fixed amount per child to each school and then permitting the school to ‘buy’ teachers within the limit of its budget. This would be a change from the current practice, which is to make the teacher assignment first and then send the school whatever funds are needed to pay them. Such a change would compel schools to accept a mix of certified and uncertified, and experienced and inexperienced, teachers. (p. 22-23)
CHAPTER 4: DATA ANALYSIS

INTRODUCTION

Our study is designed to explore the distribution of instructional resources in the context of educational equity. More specifically, we examine the distribution of teacher experience and teacher salary (instructional resources) between elementary schools in the District. Our analysis of staffing (teacher experience) and spending (teacher salary) patterns seeks to understand the relationship between resource allocation and elementary schools serving different concentrations of student needs. In other words, do schools serving high proportions of low income and low performing students receive “appropriately different levels” of instructional resources?

RESEARCH QUESTIONS

The study is intended to increase public awareness of staffing and spending disparities between elementary schools in the District. The timeframe for this study is 2001-2005. As such, our study speaks to the distribution of instructional resources in Philadelphia’s modern era of school reform. In general, we seek to understand if the District, under the leadership of CEO Paul Vallas and the School Reform Commission, is moving towards a more equal or equitable distribution of instructional staff and instructional dollars.

More specifically, the following three questions guided our analyses of instructional resource distribution:

1. Is there an equitable distribution of instructional staff (teacher experience) between elementary schools in the District?

2. Is there an equitable distribution of instructional dollars (teacher salary) between elementary schools in the District?

3. What is the relationship between significant spending gaps (above and below average spending) and neighborhood conditions?
RESEARCH METHODS

Qualitative Interviews
We present findings from qualitative interviews with individuals involved in Philadelphia’s public schools. The interview data speak to inherent constraints in the distribution of instructional resources across all schools in the District, as well as point to potential opportunities towards a more equitable distribution of instructional staff and spending. Ultimately, interview findings will assist RFD in refining its approach to the study topic and in developing viable policy solutions.

Understanding Data Analysis
We compare staffing and spending data at two elementary schools to increase public understanding of the descriptive research methods used in this study. A Source Data Matrix displays the school and neighborhood data used in our analysis of staffing and spending trends. A Calculated Data Matrix displays new variables we calculated using raw source data. The Two Schools Tables (1-8) illustrate how data were analyzed at the school-level. Additionally, the Two Schools Tables present more detailed analyses of staffing and spending issues at the school-level that could not be performed for all 170 elementary schools.

Distribution of Instructional Staff
We answer the first research question: Is there an equitable distribution of instructional staff between elementary schools in the District? We explore staffing trends across all 170 elementary schools in the District. The distribution of teacher experience is explored in terms of student poverty concentration at the school-level. A series of tables are used to describe the distribution of staff and student data, the relationship between teacher experience and salary and the relationship between student test scores and student poverty.

Distribution of Instructional Dollars
We answer the second research question: Is there an equitable distribution of instructional dollars between elementary schools in the District? We explore spending trends across all 170 elementary schools in the District.
The distribution of instructional dollars is explored in terms of student poverty concentration at the school-level. Charts and tables are used to describe the distribution of instructional spending per student and above and below average spending gaps.

**Instructional Spending Gaps & Neighborhood Conditions**

We answer the third and final research question: What is the relationship between significant spending gaps and neighborhood conditions? We explore significant spending gaps (in excess of $100,000 annually for five consecutive years) across 59 elementary schools in the District; 29 schools with below average spending gaps and 30 schools with above average spending gaps. The distribution of instructional spending gaps is explored in terms of student poverty concentration and select neighborhood catchment variables. Tables and charts are used to describe the relationship between spending gaps and (a) median home price, aggravated crime rate and burglary rate; (b) average salary; (c) per pupil spending; and (d) student test scores.

**QUALITATIVE INTERVIEWS**

**Introduction**

During the summer months of 2006, the report author conducted qualitative interviews with individuals who possess unique knowledge of the study topic—the distribution of instructional resources in the School District of Philadelphia (District). The underlying objectives of the interview protocol were to collect objective feedback on our preliminary research findings and to better understand the factors contributing to the unequal allocation of instructional resources. Participant interviews allowed RFD to more fully comprehend the range of issues, constraints and opportunities toward a more equitable model of instructional resource distribution. Ultimately, interview data were used to refine our approach to the study topic and develop viable policy solutions.
RFD initially proposed to interview a total of 20 individuals, including District personnel (administrators, principals and teachers), local politicians, educational advocates and public school parents. RFD received approval from Temple University’s Institutional Review Board to conduct interviews; however, the District’s Office of Research and Evaluation twice denied our formal request to interview District personnel. RFD was consequently unable to interview school teachers, principals and regional office administrators as part of its study on funding disparities. Some 30 individuals received formal study invitation letters; 10 people were subsequently interviewed as part of this study.

It is important to note that the interview protocol was not designed to generate a random sampling of opinions on the study topic. The purpose of the interviews was to gather objective feedback from individuals intimately involved in Philadelphia’s public education system. Potential study respondents were invited to take part in our study because of their firsthand experience with, or extensive knowledge of, the distribution of instructional resources. And while time constraints and other factors prevented us from speaking with the thirty individuals we identified, we only anticipated a 50% participation rate. The range of opinions and perspectives presented below clearly enhanced the relevancy and quality of our work.

**INTERVIEW PROCESS**

Each interview began with a brief presentation of statistical analyses and preliminary findings. Staffing and spending data were presented for elementary, middle and high schools. We used an open-ended interview format to generate specific and honest feedback about instructional spending gaps in the District. Each interview was tailored to the individual experiences of each participant. In general, we used the following discussion prompts to guide each interview:

1. The validity of our preliminary analysis of funding equity in the District. What are the strengths and weaknesses of the analysis? Are there gaps in the analysis?
2. What factors contribute to the inequity in teacher salaries between schools.

3. What affect has this inequity had on “significantly impacted” (below and above average spending) schools?

4. What is the status of existing initiatives or policies designed to address this inequity?

5. What recommendations do you have for addressing the unequal distribution of instructional resources?

Respondents were encouraged to explore other contextual factors they felt influenced or predicted disparate spending patterns. In addition, respondents were free to identify constraints and issues outside the scope of this study.

**Interview Respondents**

<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>PRIMARY AFFILIATION</th>
<th>SECONDARY AFFILIATION</th>
<th>INTERVIEW DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FATTAH</td>
<td>US CONGRESSMAN</td>
<td></td>
<td>May 16, 2006</td>
</tr>
<tr>
<td></td>
<td>Philadelphia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HANNA</td>
<td>DISTRICT</td>
<td>Former Principal</td>
<td>May 16, 2006</td>
</tr>
<tr>
<td></td>
<td>VP Human Resources</td>
<td>District School</td>
<td></td>
</tr>
<tr>
<td>SHAW</td>
<td>EPOP</td>
<td>Parent District</td>
<td>May 17, 2006</td>
</tr>
<tr>
<td></td>
<td>Parent Leader</td>
<td>School</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Public Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRUZ</td>
<td>EPOP</td>
<td>Parent District</td>
<td>May 17, 2006</td>
</tr>
<tr>
<td></td>
<td>Staff Member</td>
<td>School</td>
<td></td>
</tr>
<tr>
<td>VALLAS</td>
<td>DISTRICT</td>
<td>Chief Executive Officer</td>
<td></td>
</tr>
<tr>
<td>THORTON</td>
<td>DISTRICT</td>
<td>Chief Academic Officer</td>
<td>June 13,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2006¹⁵</td>
</tr>
<tr>
<td>OLANIPEKUN</td>
<td>DISTRICT</td>
<td>Chief Financial Officer</td>
<td></td>
</tr>
<tr>
<td>HARRIS</td>
<td>DISTRICT</td>
<td>Budget Director</td>
<td></td>
</tr>
</tbody>
</table>

¹⁵ The four District representatives spoke “on record” and understood their feedback would be incorporated in RFD’s final report. However, the representatives did not sign RFD’s formal study release form. Therefore, in the presentation of data that follows, responses are attributed to the District and not to individuals.
Presentation of Interview Data

Interview data are organized by theme and presented in chronological order to reflect our growing understanding of the interview topic. In other words, our knowledge of barriers and opportunities in the distribution of instructional resources increased significantly between the first and last interviews. Every attempt was made to preserve the individual voice and perspective of the interview respondents. And while common themes emerged over the course of the process, we made every attempt to include divergent perspectives in the presentation of data.

THEME 1: THE REAL ISSUE

Following a brief presentation of preliminary findings, respondents provided general impressions of study approach and underlying assumptions. More specifically, respondents were asked whether the analyses of funding disparities addressed real issues or problems facing the District.

Theme 1 Table: The Real Issue

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congressman</td>
<td>At the end of the day, teachers are the most valuable input in the equation. Who is in front of the classroom makes a difference.</td>
</tr>
<tr>
<td>District VP</td>
<td>From my perspective [Human Resources], the real issue is how do we make the job doable for principals and teachers. That means having enough resources so that staff have the opportunity to be successful with the kids.</td>
</tr>
<tr>
<td>EPOP Leader</td>
<td>What we are talking about here is giving all students the same educational experience as the students in the Northeast [Region] and Germantown are getting.</td>
</tr>
</tbody>
</table>
**EPOP Staff**  
Quality people [teachers] for quality schools.

**DISTRICT**  
This is old news. There is nothing new here…Every year this issue comes up. We performed the analysis ourselves.

**District Teacher**  
My argument is that experienced teachers can pull kids up. They are the ones with the experience dealing with these environmental issues.

**Councilman**  
The focus should be, who is in the classroom for which kids? The real issue we are talking about here is the quality of teachers…It’s not an issue of what the teachers are making.

---

**Focus on the Real Issues**

With the exception of District administrators, respondents indicated that issues of teacher quality and instructional expenditures were critically important. The congressman noted, “We have to figure out ways to improve salaries and working conditions to create a better mix of teachers.” While families served by disadvantaged neighborhood schools face considerable environmental constraints, the teacher was optimistic that the District could “change the [distribution] of dollars…and the numbers [test scores].” Finally, the councilman asserted that spending disparities were “fundamentally a management issue and how District administration assigns the best teachers to schools where students have the greatest needs.”

Though the District did not dispute the validity of the research data, these leaders felt the organization of data was misleading and that the focus on instructional spending gaps missed the mark. The following list summarizes administration’s varied impression of real issues facing the District:

*We are, and remain, a very under funded school district. According to your definition, over 90% of our neighborhood schools are high poverty schools.*

*More time must be embedded in the school day for staff development.*
Another issue I’m concerned with is how to attract quality leadership [principals] to the District.

Training and retention of teachers [specifically new teachers].

The Out-of-School Youth piece is critical.

Up and down the East coast, districts like Philadelphia are struggling with the age of their infrastructure [school buildings]...Deferred costs related to maintenance of buildings...We have very large buildings...[and] there is a mismatch between the size of our physical facilities and the size of the population.

Class size is an issue. I mean the research says if you can’t keep class size below 17, you might as well make it 33, because you aren’t going to be effective anyway

**THEME 2: SPENDING DISPARITIES**

The following table summarizes feedback on the existence of disparate spending patterns between schools.

*Theme 2 Table: Spending Disparities*

<table>
<thead>
<tr>
<th><strong>AFFILIATION</strong></th>
<th><strong>RESPONSE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Congressman</td>
<td>Regional equity is a big concern. Even children in our best schools are being cheated in terms of funding and per-pupil resources.</td>
</tr>
<tr>
<td>District VP</td>
<td>People want to say that kids at [high poverty school] aren’t learning because they are from a single parent family or because they are poor or that it’s the kids’ fault. The truth is, they aren’t getting the same resources as this other school [high performing, low poverty school]. The high poverty school doesn’t have as many highly qualified teachers.</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>The result of site selection, I believe, will be that these low poverty schools will choose to hire a graduate student from Penn with 3 years experience over the teacher with 20 years experience and the salaries at that school will come down and gaps will equalize. Sandra Dungee Glenn [SRC Member] and our office is going to examine this issue of per-pupil [instructional]</td>
</tr>
</tbody>
</table>
expenditures.

| **EPOP Leader** | How can we have high tech schools of the future [for all students] on little house of the prairie budgets? This is a theft of an education of thousands of students. Worse is, this robbery is knowingly done [by the District]. |
| **District Teacher** | It’s really a value judgment [whether] poverty and family environment are stronger [than affect of spending disparities]. Collectively, teachers can make a difference. Blame is placed on the family, on poverty on the urban environment…these intangible things, [the District] can’t change….but we can change the schools and the funding. |
| **Councilman** | We need to expose our children to more than the three blocks around their house. |

### Focus on Spending Disparities

In general, the practice of spending less in schools serving students with the greatest learning needs was seen as highly problematic. Most respondents indicated that spending disparities were primarily responsible for chronic achievement gaps between schools. Inequitable spending patterns were seen as having a stronger influence on student outcomes than family background, ethnicity or poverty status.

The congressman discussed spending disparities at both the interdistrict and intradistrict levels. He found it highly problematic that poor and minority students are expected to achieve on par with their more affluent peers in the absence of equal instructional resources:

*In California, judge threw out a case on the state’s new exit exam requirement. [The judge knew] that poor students don’t get a fair shot, yet they still have to take the same test and meet the same standards. Where’s the logic in that? Students who we know don’t get the same resources, still have to meet the same standards.*
The EPOP leader expressed reservation about societal assumptions regarding parents’ ability to comprehend budget documents and spending patterns:

A single parent on welfare understands money management and they can understand a school budget.

It’s wrong to think that African American and Latino parents aren’t thinking about school quality, especially upwardly mobile families. No one wants to move into a $250,000 home with a crappy neighborhood school…So much money is being diverted to these new high end schools that are catering to new, more affluent families.

The EPOP leader also noted that the spending advantage of some schools caused other schools to be short-changed. “That surplus in spending is coming from somewhere. The only reason you can pay teachers $65K in the Northeast Region is because you are only paying $45K in the Central East Region.”

Both the teacher and councilman viewed spending disparities within a wider context of access and exposure. “Students need a view of longevity…So many kids live absolutely in the moment, and have no idea of what it takes to get into college or getting a job.” The councilman stressed issues of life long education, family literacy and the need for K-16 education and training opportunities in every neighborhood school:

Let's drop K-12 from the vocab. Let’s talk about K-16. Let’s talk about university partnerships…We need to make sure that our kids are either work ready or college ready. We need a massive campaign by the business community to encourage employees to go back to school and to upgrade their skills.

THEME 3: TEACHER EXPERIENCE

The following table displays respondent perceptions of the relative value of experienced (higher paid) teachers. With the notable exception of District leaders, the respondents indicated experienced teachers make a difference.

Theme 3 Table: Teacher Experience
Both the District VP and teacher asserted that experienced teachers are generally more effective than their more novice counterparts. This perspective on the relationship between teacher experience and teacher quality sharply contrasts with the District’s perspective. District administration soundly rejected the assumption that teacher experience is tied to academic performance.

**THEME 4: INEXPERIENCED TEACHERS**

Having explored respondent feedback on the value of teacher experience, the following table details perceptions of inexperienced teachers. The respondents were genuinely sympathetic toward the significant challenges facing more novice teachers.

*Theme 4 Table: Inexperienced Teachers*
<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
</table>
| **EPOP Leader** | Inexperienced teachers do not get resources like reading coaches and follow through from principals. And the next year, that teacher is gone.  
|              | This school that hired four 1st year teachers has a lot of issues to overcome—cultural issues, discipline issues and parental issues…With an ESL population, even basic communication is extremely difficult…You have a racial mismatch as well—white teachers teaching and black and Latino students. Cultural differences can create serious problems. |
| **EPOP Staff** | Younger teachers with less experience are struggling with the new curriculum and don’t understand how to work the PSSA into day-to-day learning.  
|              | If a child isn’t doing well, who is holding them accountable? If the teacher doesn’t do it, the child loses. Teachers aren’t checking the homework and parents often don’t understand the homework assignments? Why aren’t these teachers in touch with the parents? And how can they be with 32 students? If the teacher had a learning assistant, there would be more time to meet student needs. |
| **DISTRICT**  |                                                                                                                                                                                                          |
| **Councilman** | We are throwing these young teachers into the water and telling them to swim.                                                                                                                                 |

**THEME 5: LOW & HIGH POVERTY SCHOOLS**

The following table highlights participant views on the fundamental differences between schools serving different types of students. Participant perceptions suggest the prevalence of separate and unequal schools in the District. In short, disparities in neighborhood quality reflect disparities in school quality.
**Theme Table 5: Low & High Poverty Schools**

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPOP Leader</strong></td>
<td>[Black students in predominately white schools] <em>They are told if they don’t behave, they’ll be sent back to the school in their neighborhood…Magnet schools and the like are akin to an apartheid system in the District.</em></td>
</tr>
<tr>
<td><strong>District Teacher</strong></td>
<td>High performing schools address safety issues and teachers and principals are connected with the day-to-day experiences of families. High poverty schools are in unsafe neighborhoods and far less families are connected to the schools and the kids.</td>
</tr>
<tr>
<td><strong>Councilman</strong></td>
<td>The condition some of these buildings are in is a strong deterrence. No one wants to work or teach in a decrepit building. It doesn’t matter whether you are a doctor, lawyer, secretary or whoever. Teachers want clean, safe and attractive environments. They want to know that the neighborhood outside has the same qualities. Good teachers are going to flock to these schools.</td>
</tr>
</tbody>
</table>

The EPOP leader points to the fact that there is an overall lack of high quality education choices in poor and minority neighborhoods. She suggests when poor students of color transfer to higher performing schools in more affluent communities, they are unfairly targeted as trouble makers and reminded that they do not belong.

The teacher noted that in terms of school quality and student outcomes, rural and urban school districts both serve poor students and receive disproportionately less resources. Within the District, she finds stark differences in access to cultural enrichment programs. “There simply aren’t the kind of offerings at high poverty schools, such as music and art classes…I see so many kids whose learning potential is not being taken advantage” because they do not have access to the same range of offerings.

The councilman underscores disparities in physical facilities between poor and affluent neighborhoods. He continues, schoolchildren are well aware of the differences between schools. “Children are very perceptive. They can tell
whether or not adults care. They know whether the environment [school building and neighborhood] is safe or unsafe.” The councilman wonders what kind of message we are ultimately sending to students in disadvantaged schools.

**THEME 6: DRAFTING TEACHER TALENT**

High poverty, high minority schools face disproportionate challenges in drafting and retaining talented teachers. Respondents note that various factors work against disadvantaged schools in the effort to attract more experienced teachers.

*Theme Table 6: Drafting Teacher Talent*

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congressman</td>
<td>Do not lose sight of the fact that hiring decisions are not made in a vacuum. Recent graduates and new teachers are drawn to the suburbs by salary considerations and working conditions.</td>
</tr>
<tr>
<td>District VP</td>
<td>Site selection is a step in the right direction and its working. It helps bring that team approach to the hiring process. You need a strong team of teachers and a principal working together…</td>
</tr>
<tr>
<td>EPOP Leader</td>
<td>High quality teachers funnel out of these schools because of issues that go beyond money… At the end of the day, you just can’t get the high quality or experienced teachers to teach in these high poverty schools.</td>
</tr>
</tbody>
</table>

The congressman distinguished between interdistrict and intradistrict staffing challenges. Suburban districts in the region unfairly compete for teacher talent:

*Wealthy suburban districts are attracting some of the best teachers. A teacher might have done all his early training in Philadelphia, but they are drawn to the suburbs because of better working conditions, like smaller class sizes, better teaching resources and higher starting salaries.*
Within the District, teacher control over the teacher assignment process places some schools as a distinct disadvantage. “The seniority transfer allows teachers to migrate to perceived ‘better schools.’ As a result, some schools are overloaded with senior, highly qualified teachers.”

The District VP shared his perspective on District efforts to attract and retain new teachers:

*Our retention rate for new teachers is now at 90%. Schools are no longer hemorrhaging from the loss of [new] teachers to the suburbs…Principals have become more attuned to team leadership…Some of the improvements in retention have been the result of the standardized curriculum and the fact that the District cares about retaining new teachers.*

Finally, the EPOP leader discussed various push factors that affect teachers’ decisions to leave or stay:

*There might be leadership issues with the principal. The teacher may have certain perceptions of the neighborhood; crime rates are high or the neighborhood itself is dangerous…Sometimes the issue can be as small as parking. Other times, teachers create issues as an excuse to leave. And sometimes, it’s their perception of parents, like ‘why are these parents always fusing at me.’*

**THEME 7: PRINCIPAL ROLE**

Most respondents indicated that principals play a critical role in staff stability. The following table summarizes feedback on the importance of school leadership.
The District VP and the EPOP leader believe principals can and should engage the wider neighborhood. In recounting his experiences as an elementary school principal in Philadelphia, the District VP describes the interdependence of school and neighborhood conditions.

In my experience as an elementary principal working with EPOP, we reached out to the community and got parents involved. Through organizing, our approach changed…and we started asking families what they needed.

We addressed quality of life issues in the community, like abandoned cars and drugs and crime in the neighborhood. Now, this [form of involvement] is outside the principal’s scope or contract role to get involved in parent organizing.

You know, these quality of life issues in the community, they are working condition issues as well…If you get parents involved and improve quality of life [in the neighborhood], you will have experienced teachers knocking down your door trying to get into that school.

Noting that all principals are not necessarily prepared to facilitate connections with the community, the EPOP leader asserts, “Principals need training on how to open up to parents and the community. Principals should be engaging parents and educating them about budget issues so they can advocate together.”
THEME 8: STAFFING RECOMMENDATIONS

The following table summarized the respondents’ recommendations for creating a more equitable distribution of experienced teachers. In general, the recommendations target staffing inequities within high poverty schools.

**Theme Table 8: Staffing Recommendations**

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District VP</strong></td>
<td>Build on the historic agreement between the District and PFT for site selection.</td>
</tr>
<tr>
<td></td>
<td>Teachers have to be included in real decision making roles…If they are not included, they will leave.</td>
</tr>
<tr>
<td></td>
<td>Giving teachers the time to build a team, to talk and grow, takes time and cost money. But it is very important to kids</td>
</tr>
<tr>
<td><strong>EPOP Staff</strong></td>
<td>Instead of school-based professional development, why not bring a mix of teachers together from different schools to share best practices. This would be an opportunity for new teachers to be groomed by veterans. And the kids would benefit too.</td>
</tr>
<tr>
<td></td>
<td>Provide incentives for senior teachers to work in high poverty schools. All schools should have an equal mix of teachers based on experience.</td>
</tr>
<tr>
<td><strong>DISTRICT</strong></td>
<td>It’s an issue of seniority-rights. I’m sure that some principals would like to jettison some of their senior teachers that are not effective. And that would cause the average salary to come down.</td>
</tr>
<tr>
<td></td>
<td>If there was no PFT, this wouldn’t be an issue.</td>
</tr>
<tr>
<td><strong>District Teacher</strong></td>
<td>Teachers would like more flexibility and options in terms of teaching assignments. They would teach in some of the disadvantaged schools if they could get the resources—like books, class size and principal support—they need.</td>
</tr>
<tr>
<td><strong>Councilman</strong></td>
<td>Give new teachers full opportunity to utilize training and expertise of more senior teachers. New teachers should be matched with more senior teachers in partnership. Right there, you automatically reduce class size.</td>
</tr>
</tbody>
</table>
We need to prepare new teachers so that one day, they can have their own classrooms.

THEME 9: SPENDING RECOMMENDATIONS

The respondents were asked to respond to RFD’s preliminary recommendations for balancing instructional investments across schools. RFD proposed restoring instructional dollars to schools with significant spending gaps. The following table summarizes feedback on how additional instructional dollars might be spent to improve instruction in high poverty schools.

*Theme Table 9: Spending Recommendations*

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congressman</td>
<td>High poverty schools should be brought up to par. You would create a lot more love for schools in the neighborhoods. The idea is to take what a successful low poverty school has and ensure there are comparable resources for the high poverty school.</td>
</tr>
</tbody>
</table>
| District VP   | Schools should have a decision and role in how funds are used to improve the learning environment. Site selection is a first step, but we haven’t gotten there yet.  
If the average salary and benefits package is $72,000, and a school hires a new teacher at $48,000, then that school would receive the difference ($12,000) to provide professional development for the new teacher.  
The salary cycle should be flipped to end on December 31st to allow for real time changes and adjustments in the budget. |
Funds could be used for music programs, art classes and libraries. These types of offerings enhance learning and school quality. Kids enjoy music, and if they have these classes, maybe they’ll go into their English class with a better attitude.

Reduce class sizes too. I mean, 32 students per 1 teacher is unmanageable. If schools could hire more teaching assistants and paraprofessionals, they could free up time for new teachers to prepare for classes.

A fundamental restructuring of dollars will not solve the problem. People like EPOP would have you believe if you only equalize the funding, the world would be a beautiful place. As if it’s that simple.

Listen, the money is real and we can...equalize resources. If we had enough money, more teachers could do home visits and make a connection between parents and schools, and perhaps engage parents in their child’s education.

Additional dollars should be left up to the school’s discretion. Low performing schools need recreation, the arts and other outlets. There is an absolutely clear correlation between playground equipment and academics.

**THEME 10: SPENDING CONSTRAINTS**

The final table lists questions raised by some respondents about the feasibility of introducing new funding practices.

**Theme 10: Spending Constraints**

<table>
<thead>
<tr>
<th>AFFILIATION</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congressman</td>
<td>The idea is not to take our best schools and deplete them. With the salary cap scenario, where the pot of money does not increase, if you pull resources out of schools with more resources, you will only push highly qualified teachers out of the district. There should be some parameters on how that money is spent, based on the research evidence and the individual experience of schools. For instance, to improve the educational attainment of students, provide training to</td>
</tr>
</tbody>
</table>
newer teachers.

**District VP**

The problem with using real budgets is what would happen when a veteran teacher leaves and is replaced with a lower salaried teacher? How much money do you take out of the budget? If you did real budgeting, how do you account for 11 salary grades and salary differentials.

**DISTRICT**

We are a School District that remains significantly underfunded.

The challenge is, where do we find the other funding in the existing budget…The only discretionary pots that exist are Title I and Desegregation. The laws are very clear on how this money is to be allocated. The rest of our budget is formula driven.

What is the cost of switching to real budgeting practices?

---

**UNDERSTANDING DATA ANALYSIS**

We compare staffing and spending data at two elementary schools to increase public understanding of the descriptive research methods used in this study. The following data matrices show how staffing and spending data were collected and analyzed.

**Source Data Matrix**

The following matrix displays school and neighborhood data used in our analysis of staffing and spending trends. Raw data were collected for all public elementary schools in the District from 2001-2005. Only elementary schools with three consecutive years of salary and experience data were included in our analysis.
<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>SOURCE</th>
<th>LEVEL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Salary</td>
<td>PA Dept of Education</td>
<td>Individual</td>
<td>Rounded to nearest dollar</td>
</tr>
<tr>
<td>Teacher Experience</td>
<td>PA Dept of Education</td>
<td>Individual</td>
<td>Total years of service</td>
</tr>
<tr>
<td>Total Teachers</td>
<td>PA Dept of Education</td>
<td>School</td>
<td>Total full-time (100%) teachers&lt;sup&gt;16&lt;/sup&gt;</td>
</tr>
<tr>
<td>Student Poverty</td>
<td>PA Dept of Education</td>
<td>School</td>
<td>% total students eligible for free or reduced price lunch</td>
</tr>
<tr>
<td>Total Students</td>
<td>NCES</td>
<td>School</td>
<td>Total students enrolled</td>
</tr>
<tr>
<td>Total Non White Students</td>
<td>NCES</td>
<td>School</td>
<td>Total students American Indian, Asian, Black and Hispanic</td>
</tr>
<tr>
<td>Advanced/Proficient Reading Test Score</td>
<td>PA Dept of Education</td>
<td>School</td>
<td>% students tested with advanced and proficient PSSA reading test scores</td>
</tr>
<tr>
<td>Median Residential Sale Price</td>
<td>CML/UPENN</td>
<td>Catchment</td>
<td>For all residential property types.</td>
</tr>
<tr>
<td>Aggravated Crime</td>
<td>CML/UPENN</td>
<td>Catchment</td>
<td>Rate per 1,000 residents; (400 series)</td>
</tr>
<tr>
<td>Burglary</td>
<td>CML/UPENN</td>
<td>Catchment</td>
<td>Rate per 1,000 residents; (500 series)</td>
</tr>
</tbody>
</table>

**Calculated Data Matrix**

The following matrix displays new variables RFD calculated using raw data from the Pennsylvania Department of Education and the National Center for Education Statistics. Separate calculations were performed for all public elementary schools in the District from 2001-2005. With the exception of Districtwide Salary, which applies to all elementary schools in sample, the remaining variables are calculated at the school level.

<table>
<thead>
<tr>
<th>NEW VARIABLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Salary</td>
<td>Sum of total salaries divided by total teachers</td>
</tr>
<tr>
<td>Districtwide Salary</td>
<td>Sum of total salaries divided by total teachers</td>
</tr>
<tr>
<td>Instructional Spending per Pupil</td>
<td>Sum of total salaries divided by total students</td>
</tr>
<tr>
<td>Instructional Spending Gap</td>
<td>(Average Salary – Districtwide Salary) multiplied by total teachers</td>
</tr>
<tr>
<td>Above Average Spending</td>
<td>Positive instructional spending gap</td>
</tr>
<tr>
<td>Below Average Spending</td>
<td>Negative instructional spending gap</td>
</tr>
<tr>
<td>Average Experience</td>
<td>Sum of total years experience divided by total teachers</td>
</tr>
<tr>
<td>School Poverty Level</td>
<td>Recode variable based on distribution of poverty across all</td>
</tr>
</tbody>
</table>

<sup>16</sup> Only staff positions that could be verified as classroom teachers were included in the analysis. The fields Certificated Assignment Number and Certificated Assignment Description were used to remove non-teaching positions such as: Other (Certificated Personnel), Other (Non-Certificated Personnel), Principals, Counselors, School Nurse, etc.
The following section will further clarify how we used source/raw data and calculated variables to explore staffing and spending trends.

**TWO SCHOOLS OVERVIEW**

We compare staffing and spending data between two elementary schools to increase public understanding of the descriptive research methods used in this study. The Two Schools Tables illustrate how data were treated and prepare readers for subsequent analyses of staffing and spending trends across all elementary schools in the District. Additionally, the Two Schools Tables present more detailed analyses of staffing and spending issues at the school-level that could not be performed for all 170 elementary schools in our sample.

We chose to include Willard Elementary in the two schools example because parent leaders from EPOP are actively involved in this neighborhood school. The comparison school, Loesche Elementary, was selected for two reasons. In 2005, Loesche is the only other elementary school in our study with exactly 51 teachers on its faculty. Because instructional resources (teacher experience and salary data) are the focus of this study, it is important for illustrative purposes to compare schools with equal numbers of teachers. More simply, it is important to compare apples with apples.

Second, this study seeks to understand staffing and spending trends across elementary schools in different neighborhoods. As such, it is equally important to examine disparities in instructional resources between different schools in different neighborhoods. Willard Elementary, located in the central east academic region, is considered a high poverty school. Loesche Elementary,
located in the northeast academic region, is considered a med low poverty school. These schools are also different in terms of student ethnicity. In 2005, 90% of Willard students were either Latino or African American, compared with 38% of Loesche students.

<table>
<thead>
<tr>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment Map ID #</td>
<td>94</td>
</tr>
<tr>
<td>Academic/Geographic Region</td>
<td>Central East</td>
</tr>
</tbody>
</table>

The following section will explore differences in staffing and spending patterns between the two elementary schools during the 2004-2005 school year. This detailed level of analysis is necessary towards understanding lesser known staffing and spending disparities.

**Defining School Poverty Levels**

Our measure of student poverty is the percentage of total students participating in the National Student Lunch Program (NSLP). This variable was used to determine the level of student poverty in a given school for a given year. Students from families receiving public assistance and students from families whose annual income exceeds federal poverty thresholds are eligible for free or reduced price lunches through NSLP. Because student participation in NSLP is determined by family income, this variable also speaks to poverty levels in the neighborhood catchment area.

The following list displays the four school poverty categories for this study:

*LOW POVERTY ELEMENTARY SCHOOL* / Up to 39% of total students enroll in the National Student Lunch Program (NSLP).

*MED LOW POVERTY SCHOOL* / Between 40% and 59% of total students enroll in NSLP.

*MED HIGH POVERTY SCHOOL* / Between 60% and 79% of total students enroll in NSLP.
HIGH POVERTY SCHOOL / Eighty percent (80%) or more of total students enroll in NSLP.

These measures of student poverty concentration were used to divide our sample of elementary schools into four groups. In terms of the equity approach, higher levels of concentrated poverty (high poverty schools) at the school-level is indicative of higher levels of student learning needs. Table 1 portrays the connection between school poverty categories and NSLP data.

Table 1 illustrates two points for consideration. First, notice that the percentage of total students participating in NSLP changes from year to year. Variations in participation rates are common across all elementary schools. Second, though the NSLP participation rate changed each year, the school poverty category did not. In other words, the rate of participation did not exceed the parameters for med low poverty schools (Loesche Elementary) or high poverty schools (Willard Elementary).

Comparing Staffing & Student Data

Table 2 illustrates the relationship between staffing levels and student enrollment. To calculate class size, total students were divided by total teachers.
Two Schools Table 2 / Comparison of Staff & Students

<table>
<thead>
<tr>
<th></th>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>801</td>
<td>777</td>
</tr>
<tr>
<td>Total Teachers</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Class Size</td>
<td>16</td>
<td>15</td>
</tr>
<tr>
<td>Average Years Exp</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>Total Years Experience</td>
<td>393</td>
<td>1,224</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed   Analysis: RfD

In 2005, each school received 51 full-time teaching positions. The District’s staff based allocation process assigns a fixed number of teaching positions to each school based on enrollment. Though the number of teachers is the same, there are noticeable differences in staffing experience levels. First, Willard served 24 more students than Loesche did, which explains the difference in class size. Second, the collective and average teaching experience of Loesche faculty far exceeds that at Willard. On average, Loesche teachers had three times the amount of experience as Willard teachers did.

Calculating Average Salary and Average Experience

Our database includes individual salary and experience variables for every teacher in the District from 2001-2005. Only full-time, classroom teachers are included in the analysis. To calculate average teacher salary and experience at the school level, total salaries and total years teaching experience were divided by total teachers. The following table illustrates the inherent connection between teacher experience and compensation.

Two Schools Table 3 / Connecting Average Salary with Average Experience

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LOESCHE</td>
<td>$61,222</td>
<td>24</td>
<td>$66,192</td>
<td>25</td>
<td>$65,705</td>
<td>24</td>
</tr>
<tr>
<td>WILLARD</td>
<td>$46,513</td>
<td>10</td>
<td>$49,309</td>
<td>9</td>
<td>$49,388</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed & NCES   Analysis: RfD
The average teacher salary at Loesche Elementary is over $15,000 higher than the average salary at Willard Elementary. Notice that on average, the average teacher at Loesche Elementary has over 23 years teaching experience compared with under 10 years at Willard Elementary. Under the District’s single salary schedule, compensation is tied directly to years teaching experience and educational training. As such, average years experience predicts average teacher salary.

**Distribution of Experienced and Inexperienced Teachers**

In the next table, we use the District and PFT definition of an experienced teacher to further explore the staffing disparities separating the two schools. The 2004 collective bargaining agreement between the District and the teachers union defines an experienced teacher as having five or more years classroom teaching experience. Conversely, inexperienced teachers are those with less than five years teaching experience.

### Two Schools Table 4 / Distribution of Teacher Experience

<table>
<thead>
<tr>
<th>Concentration of Inexperienced Teachers</th>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Teachers</td>
<td>Percent Faculty</td>
</tr>
<tr>
<td>1st Year</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>2nd Year</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>3rd Year</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>4th Year</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Inexperienced Teachers</td>
<td><strong>14</strong></td>
<td><strong>27%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentration of Experienced Teachers</th>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Teachers</td>
<td>Percent Faculty</td>
</tr>
<tr>
<td>5 to 10 Years</td>
<td>25</td>
<td>49%</td>
</tr>
<tr>
<td>10 to 20 Years</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td>20 to 30 Years</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>30 or More Years</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Experienced Teachers</td>
<td><strong>37</strong></td>
<td><strong>73%</strong></td>
</tr>
<tr>
<td>Total Teachers</td>
<td><strong>51</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed                  Analysis: RfD
The concentration of inexperienced teachers in Willard Elementary sharply contrasts with the concentration of highly experienced teachers at Loesche Elementary. Only 73% of teachers in Willard meet the experienced teacher threshold compared with 100% of teachers at Loesche. Moreover, 33 teachers at Loesche had 20 or more years teaching experience compared with only three teachers at Willard.

**Distribution of Teacher Type and Average Experience**
Table 5 was constructed using teachers’ Certificated Assignment Description. These position descriptors are helpful in describing what types of teachers were working in each school in 2004-2005.

**Two Schools Table 5 / Distribution of Teacher Type and Experience**

<table>
<thead>
<tr>
<th>CERT ASSIGN DESCRIPTION</th>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Teachers</td>
<td>Average Years EXP</td>
</tr>
<tr>
<td>Art, K-12</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science, Elementary</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Elementary</td>
<td>33</td>
<td>8</td>
</tr>
<tr>
<td>English As Second Language, K-12</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Health &amp; Physical Education, K-12</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td>Kindergarten, age 5 (K5)</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Mentally and/or Phys Impaired, Ld</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Pre Kindergarten (Pre-K)</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Music, K-12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Russian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Speech Correction</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed Analysis: RfD

Across the eleven teacher assignment categories, Loesche faculty clearly have greater teaching experience. The disparity in teaching positions and average teaching experience among teaching specialists (ESL and LD teachers) in these schools is even greater. The two ESL teachers at Willard have an average of five years experience, compared with an average of 21 years among Loesche’s three teachers. Similarly, Willard’s four Mentally/Physically Impaired (LD) have an average of eight years experience compared with Loesche’s 9 LD
teaches with 22 years experience. Equally important to note, unlike Willard, Loesche faculty included a music teacher, a foreign language teacher and a speech correction teacher.

**Calculating Instructional Spending Per Pupil**

Table 6 shows how total instructional spending at the school-level was translated into instructional spending per student. To calculate instructional spending per pupil, we divided total instructional spending (or the sum of all full-time teacher salaries) by total students.

<table>
<thead>
<tr>
<th>Willard</th>
<th>Loesche</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Spending</td>
<td>$2,518,786</td>
</tr>
<tr>
<td>Total Students</td>
<td>801</td>
</tr>
<tr>
<td>Spending per Student</td>
<td>$3,145</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed     Analysis: RfD

Again, though both schools employed 51 full time teachers, Loesche spent over $830,000 more on total teacher salaries than Willard did. Given that Loesche spent significantly more on total salaries and enrolled less students, it is not surprising that instructional spending per student is also higher at this Loesche. In 2005, Loesche spent over $1,000 more per student than Willard did.

Table 7 further explains the significant spending advantage of Loesche Elementary compared to Willard Elementary.

**Two Schools Table 7 / Top 3 Salary Grades**

<table>
<thead>
<tr>
<th>Willard</th>
<th>Loesche</th>
</tr>
</thead>
<tbody>
<tr>
<td>$63,000</td>
<td>6</td>
</tr>
<tr>
<td>$69,000</td>
<td>2</td>
</tr>
<tr>
<td>$75,000</td>
<td>1</td>
</tr>
<tr>
<td>Total Teachers in Grades</td>
<td>9</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed     Analysis: RfD
Only 9 teachers (or 18% of total teachers) at Willard had the requisite teaching and educational experience to fall within the top tier of elementary school salaries. By comparison, 45 (or 88% of total teachers) at Loesche had one of the District’s highest salaries.

### Calculating Instructional Spending Gaps

The instructional spending gap compares actual spending at the school-level with a districtwide salary figure for all elementary schools in our sample. First, we calculate the difference between the average salary at each school and the districtwide salary figure. In 2005, the districtwide average salary for elementary school teachers was $56,319. We next multiply the difference by total teachers to calculate the instructional spending gap.

#### Two Schools Table 8 / Calculating Instructional Spending Gaps

<table>
<thead>
<tr>
<th></th>
<th>WILLARD</th>
<th>LOESCHE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average Salary</strong></td>
<td>$49,388</td>
<td>$65,705</td>
</tr>
<tr>
<td><strong>Districtwide Salary</strong></td>
<td>$56,319</td>
<td>$56,319</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>-$6,931</td>
<td>$9,386</td>
</tr>
<tr>
<td><strong>Total Teachers</strong></td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td><strong>Instructional Spending Gap</strong></td>
<td>-$353,483</td>
<td>$478,687</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed     Analysis: RfD

In 2005, the average salary at Willard was $6,931 less than the districtwide salary figure. The average salary at Loesche was $9,386 more than the districtwide average salary for all elementary teachers in the District. It is important to note when using the instructional funding gap calculation, a school with an average salary below the districtwide figure will always have a negative or below average spending gap. Conversely, a school with an average salary that is higher than the districtwide figure will always have a positive or above average instructional spending gap.
The final step in calculating instructional spending gaps is to multiply the difference in average salary by the total number of teachers at each school site. This allows us to control for variations or differences in the total number of teachers at each school site so that comparisons can be made across schools employing different numbers of teachers. By comparing real spending with the districtwide average salary figure, we can determine “how much the total of real teacher salaries paid for by the school exceeded the amount that would have been paid if constrained by the district average for school size and school type” (Roza & Hill, 2003, p. 13).

In 2005, the average elementary school employing 51 full-time teachers would have spent $2,872,269 ($56,319 X 51 teachers) in total instructional costs. Willard spent $353,483 less than the average instructional expenditure for a school with 51 teachers. Willard was effectively “short changed” over $353,000 in instructional costs due to its concentration of inexperienced teachers. On the other hand, Loesche spent $478,687 above the districtwide average instructional expenditure for a school employing 51 teachers. As a result of its high concentration of experienced, higher salaried teachers, Loesche spent nearly $479,000 above the average instructional expenditure.

Both Willard and Loesche are considered to be schools with significant spending gaps, though for completely different reasons. From 2001-2005, Willard had a negative spending gap in excess of $100,000 annually, or below average levels of instructional expenditures. During this same timeframe, Loesche had a positive or above average instructional spending gap in excess of $100,000 annually.

Again, it is important to emphasize that the over/under concentration of teacher experience at the school-level both determines and predicts above and below average instructional expenditures. Table 8 clearly illustrates that schools with more experienced, higher salaried teachers actually spend more than the
typical school to support instruction. These little known, largely hidden instructional funding gaps are the focus of subsequent sections of data analysis. In Part 4, we will further examine instructional spending gaps in relation to student poverty concentration. In Part 5, we explore the relationship between neighborhood characteristics and significant spending gaps.

**DISTRIBUTION OF INSTRUCTIONAL STAFF**

We address the first research question: Is there an equitable distribution of instructional staff between elementary schools in the District? We explore staffing trends across all 170 elementary schools in the District. The distribution of teacher experience is explored in terms of student poverty concentration at the school-level. A series of tables are used to describe the distribution of staff and student data, the relationship between teacher experience and salary and the relationship between student test scores and student poverty.

*Defining School Poverty Categories*

Two Schools Table 1 showed how we calculated school poverty categories, or concentrations of student poverty, using student participation rates in the free or reduced price lunch program (NSLP). Within the total population of some 170 elementary schools, changes across the poverty categories were apparent. Table 1 displays the distribution of student poverty levels and ethnicity across all elementary schools in our study. Notice that the majority of elementary schools in the District are considered high poverty schools by our definition.
Table 1: Distribution of Student Poverty and Ethnicity, 2001-2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>56%</td>
<td>59%</td>
<td>63%</td>
<td>66%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>Med Low Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>21</td>
<td>23</td>
<td>13</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>53%</td>
<td>59%</td>
<td>52%</td>
<td>54%</td>
<td>62%</td>
</tr>
<tr>
<td><strong>Med High Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>11</td>
<td>8</td>
<td>20</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>72%</td>
<td>80%</td>
<td>72%</td>
<td>75%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>High Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>125</td>
<td>125</td>
<td>127</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>92%</td>
<td>91%</td>
<td>92%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td><strong>District Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td>169</td>
<td>169</td>
<td>170</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>83%</td>
<td>84%</td>
<td>85%</td>
<td>86%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed  Analysis: RfD

Nearly three in four elementary schools is considered a high poverty school because 80% or more of enrolled students receive free or reduced price lunches. From 2001-2005, 81% of all elementary school students participated in school-based lunch programs. On average, 30% of students in low poverty schools received free or reduced lunches compared with 91% of students in high poverty schools. Fifty-one percent (51%) of students in med low poverty elementary schools and 71% students in med high poverty schools were from low-income homes.

While the number of high poverty schools was relatively constant, changes in student poverty rates reduced the overall number of low poverty and medium low poverty schools. In turn, slight increases in the student poverty rate caused the number of medium high poverty schools to more than double by 2005. Elementary schools with higher percentages of students from low income families also enroll higher percentage of non white or ethnic minorities. Over 90% of students in high poverty schools are non white, namely African American and Latino.
Distribution of Total Teachers, Total Students and Class Size

Two Schools Table 2 examined the relationship between staffing levels and student enrollment totals. Table 2 below displays the distribution of teachers, students and class size across the four school poverty concentration categories.

Table 2: Total Teachers, Total Students and Class Size, 2001-2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>455</td>
<td>463</td>
<td>349</td>
<td>280</td>
<td>225</td>
</tr>
<tr>
<td>Students</td>
<td>7,949</td>
<td>8,571</td>
<td>6,714</td>
<td>4,647</td>
<td>3,732</td>
</tr>
<tr>
<td>Average Class Size</td>
<td>17</td>
<td>19</td>
<td>19</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td><strong>Med Low Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>790</td>
<td>857</td>
<td>384</td>
<td>551</td>
<td>399</td>
</tr>
<tr>
<td>Students</td>
<td>13,858</td>
<td>15,788</td>
<td>7,537</td>
<td>9,938</td>
<td>7,261</td>
</tr>
<tr>
<td>Average Class Size</td>
<td>18</td>
<td>18</td>
<td>20</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td><strong>Med High Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>446</td>
<td>321</td>
<td>759</td>
<td>809</td>
<td>969</td>
</tr>
<tr>
<td>Students</td>
<td>8,287</td>
<td>6,210</td>
<td>15,184</td>
<td>15,138</td>
<td>18,512</td>
</tr>
<tr>
<td>Average Class Size</td>
<td>19</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td><strong>High Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>4,534</td>
<td>4,163</td>
<td>3,696</td>
<td>3,987</td>
<td>3,857</td>
</tr>
<tr>
<td>Students</td>
<td>74,191</td>
<td>71,529</td>
<td>69,275</td>
<td>67,950</td>
<td>68,322</td>
</tr>
<tr>
<td>Average Class Size</td>
<td>16</td>
<td>17</td>
<td>19</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td><strong>District Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers</td>
<td>6,225</td>
<td>5,804</td>
<td>5,188</td>
<td>5,627</td>
<td>5,450</td>
</tr>
<tr>
<td>Students</td>
<td>104,295</td>
<td>102,098</td>
<td>98,710</td>
<td>97,673</td>
<td>97,827</td>
</tr>
<tr>
<td>Average Class Size</td>
<td>17</td>
<td>18</td>
<td>19</td>
<td>17</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed & NCES

Analysis: RfD

Given that the majority of schools are classified as high poverty, it is not surprising that some 70% of Philadelphia’s elementary teachers and students work and learn in schools in low income neighborhoods. In 2005, 71% of all elementary school teachers taught in high poverty elementary schools compared with 4% of total teachers working in low poverty schools.

Overall, the District lost nearly 6,500 elementary students and 800 teachers between 2001-2005. Low, medium low and high poverty schools consistently lost students over the five year period, while the District gained more medium high poverty schools. There is minimal variation in elementary class size (student-teacher ratio) across the four school poverty classifications. Low and
high poverty schools tend to have smaller class sizes, followed by medium low poverty schools. Medium high poverty schools consistently had larger class sizes, peaking at 21 students per teacher in 2004.

**Distribution of Average Teacher Experience & Salary**

Two Schools Table 3 illustrated the connection between teacher salary and experience variables. Like most urban school districts, Philadelphia uses a single salary schedule to compensate its instructional workforce. Under this compensation system, teachers with similar years teaching experience and education earn the same salary. Moreover, teachers with more years of teaching experience and higher levels of education receive higher salaries. Therefore, we expect schools with higher levels of teacher experience to have correspondingly higher levels of compensation. Table 3 displays the distribution of average teacher experience and average teacher salary across the four school poverty categories.

### Table 3: Average Years Teaching Experience & Average Teacher Salary

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVG Teacher Salary</td>
<td>$55,276</td>
<td>$56,958</td>
<td>$58,377</td>
<td>$62,145</td>
<td>$62,553</td>
</tr>
<tr>
<td>AVG Years Experience</td>
<td>21</td>
<td>20</td>
<td>21</td>
<td>20</td>
<td>19</td>
</tr>
<tr>
<td><strong>Med Low Poverty Schools</strong></td>
<td>21</td>
<td>23</td>
<td>13</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>AVG Teacher Salary</td>
<td>$54,239</td>
<td>$55,058</td>
<td>$57,421</td>
<td>$62,189</td>
<td>$61,857</td>
</tr>
<tr>
<td>AVG Years Experience</td>
<td>19</td>
<td>18</td>
<td>20</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td><strong>Med High Poverty Schools</strong></td>
<td>11</td>
<td>8</td>
<td>20</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>AVG Teacher Salary</td>
<td>$50,007</td>
<td>$51,204</td>
<td>$55,175</td>
<td>$58,263</td>
<td>$59,277</td>
</tr>
<tr>
<td>AVG Years Experience</td>
<td>16</td>
<td>14</td>
<td>17</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>High Poverty Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVG Teacher Salary</td>
<td>$46,709</td>
<td>$48,465</td>
<td>$49,279</td>
<td>$53,496</td>
<td>$54,447</td>
</tr>
<tr>
<td>AVG Years Experience</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td><strong>District Totals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Schools</td>
<td>169</td>
<td>169</td>
<td>170</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td>AVG Teacher Salary</td>
<td>$48,527</td>
<td>$50,268</td>
<td>$51,356</td>
<td>$55,463</td>
<td>$56,319</td>
</tr>
<tr>
<td>AVG Years Experience</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed  
Analysis: RfD
Consistent with local and national studies on large urban districts, these data show a strong, negative relationship between teacher experience, salary and student poverty levels. That is, as student poverty increases, average teacher salaries decrease. More importantly, the distribution of teacher experience across the school poverty categories confirms that experienced teachers are not distributed equally across District elementary schools.

As is illustrated by the Two Schools Table 3, the difference in average salary between low income and more affluent neighborhood elementary schools is the result of the imbalance in teacher experience. From 2001-2005, schools with the lowest levels of concentrated poverty had the highest levels of teacher experience. On average, teachers in schools with the lowest levels of poverty had 8 more years experience and earned nearly $9,000 more than teachers in schools with the highest levels of student poverty. In fact, disparities in teacher experience actually predict disparities in compensation or salaries.

Researchers, education advocates and district administrators are aware of the staffing disparities that separate lower income and upper income neighborhood schools. As the above illustrates, there appear to be real and significant differences in the experience and compensation levels for elementary teachers across the District. However, the affect these differences have on instructional spending at the school level and per student is not widely understood.

**Exploring Student Test Scores and Student Poverty**

The relationship between student test scores, family income and neighborhood location is practically common knowledge. Perceived differences in educational quality are at least partially responsible for the test score divide separating suburb from city, as well as affluent urban neighborhood from impoverished urban neighborhood. While the affect of staffing and instructional spending on student achievement remains uncertain, there appears to be general consensus on the relative significance of socioeconomic status. Students
with access to above average instructional resources—both faculty and spending—are more likely to achieve at above average rates. 

Neighborhood poverty in general, and family income in particular, are both understood to strongly and negatively affect student achievement, as measured by student achievement scores. Our measure of student achievement is the percent of total 5th grade students with Proficient and Advanced Reading Scores on the PSSA. Only elementary schools with three or more years of test score data included in the analysis. For point of reference, the following list compares the number of schools with test scores with the total number of schools in each school poverty category.

Table 4: Total Schools and Schools Tested by Poverty Category

<table>
<thead>
<tr>
<th>Poverty Category</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Poverty Schools</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Schools Tested</td>
<td>11</td>
<td>12</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Med Low Poverty Schools</td>
<td>21</td>
<td>23</td>
<td>13</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Schools Tested</td>
<td>21</td>
<td>23</td>
<td>13</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Med High Poverty Schools</td>
<td>11</td>
<td>8</td>
<td>20</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Schools Tested</td>
<td>9</td>
<td>7</td>
<td>19</td>
<td>19</td>
<td>24</td>
</tr>
<tr>
<td>High Poverty Schools</td>
<td>125</td>
<td>125</td>
<td>127</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>Schools Tested</td>
<td>100</td>
<td>102</td>
<td>105</td>
<td>105</td>
<td>104</td>
</tr>
<tr>
<td>District Totals</td>
<td>169</td>
<td>169</td>
<td>170</td>
<td>170</td>
<td>170</td>
</tr>
<tr>
<td>Schools Tested</td>
<td>100</td>
<td>102</td>
<td>105</td>
<td>105</td>
<td>104</td>
</tr>
</tbody>
</table>

Source: PA Dept of Ed       Analysis: RfD

Nearly every low, med low and med high poverty elementary school completed PSSA testing from 2001-2005. On the other hand, more than 20 high poverty schools were not tested each year over the same time period. Much of the discrepancy between total schools and schools tested at the high poverty concentration level is explained by the presence of K-4 schools. By definition, these schools do not have a 5th Grade, and would not be required to take the 5th grade PSSA.
Graph 1 below depicts the relationship between student poverty status and student test scores across some 100 District elementary schools.

The trend appears to confirm what many familiar with urban education disparities already know—there is an inverse relationship between student poverty and student achievement as measured by standardized tests.

In 2001, 42% of students in low poverty elementary schools scored either proficient or advanced on the statewide reading assessment (PSSA), compared with only 15% of students in high poverty schools. Four years later, some 63% of 5th graders in low poverty schools were reading at or above grade level, compared with just 32% of students in schools serving the highest concentration of poverty. Low poverty elementary schools continue to outpace the majority of the District’s neighborhood elementary schools. Despite a sharp increase in high poverty elementary test scores in 2004, the 2005 data are generally flat as med low and low poverty achievement scores continue to climb.

Source: PA Department of Education

Analysis: RfD
DISTRIBUTION OF INSTRUCTIONAL DOLLARS

We address the second research question: Is there an equitable distribution of instructional dollars between elementary schools in the District? We explore spending trends across all 170 elementary schools in the District. The distribution of instructional funding is explored in terms of student poverty concentration at the school-level. Charts and tables are used to describe the distribution of instructional spending per student and above and below average spending gaps.

Overview of Staffing Trends and Introduction to Spending Trends

In summary, an exploration of 2001-2005 staffing and student variables indicates:

Table 1  
**Student poverty and student ethnicity are closely related.** Schools in low income neighborhoods are more likely than not located in African American and/or Latino neighborhoods.

Table 2  
**Low poverty and high poverty elementary schools have similar class sizes.** Med low and med high poverty schools have slightly larger class sizes.

Table 3  
**Variations in average teacher salary are largely explained by differences in faculty teaching experience.** There is an inverse relationship between student poverty, teaching experience and compensation. As student poverty levels decrease, teaching experience and average salaries increase.

Graph 1  
**Variations in student test performance are predicted by student poverty status.** There is a similar, inverse relationship between student poverty and student achievement as measured by reading test scores. Persistently low levels of achievement in high poverty schools is evidence of severe learning needs.

These staffing trends raise several points for consideration. First, despite similar class sizes, low poverty elementary schools continue to outperform high poverty elementary schools in African American and Latino neighborhoods. Second, years teaching experience is directly related to average salary and inversely related to poverty status. That is, as student poverty levels increase,
teacher experience and compensation levels decrease. Finally, differences in student performance are largely predicted by overall levels of student poverty and neighborhood poverty. Average school test scores increase as the percentage of students from poor families decreases.

One would expect that schools with above average teaching experience and above average salaries tend to spend more than the average elementary school on total teacher salaries. Similarly, one might also expect that schools with above average staffing and spending levels tend to have higher student achievement scores. Having established that the distribution of teacher experience is uneven across District elementary schools, the next section of this chapter will explore whether similar disparities exist in instructional spending patterns.

**Instructional Spending per Student**

The Two Schools Tables raise important issues about the distribution of instructional resources across schools. First, average salary and teaching experience calculations can mask considerable differences within schools. Second, staff based allocations do not guarantee every school will receive an equal number of teachers. Third, there appears to be real and significant differences between the districtwide salary figure (average salary for all elementary school teachers) and individual school salaries. Finally, an analysis of total salary spending is necessary to uncover per pupil funding differences.

Two Schools Table 6 shows how instructional spending per student was calculated using total salary expenditures at the school-level. The same method is also used to determine per pupil expenditures across the entire population of District elementary schools. Graph 2 uses trend data to illustrate the relationship between total instructional expenditures and total students. In short, schools that spend more on total teacher salaries spend more per pupil.
Overall, there is marginal difference in average instructional spending per student across high and med high poverty schools. From 2001-2005, there is a convergence of trend lines among schools with the two highest concentrations of student poverty and the districtwide figure. However, these same trend lines indicate that spending disparities between low and high poverty elementary schools are growing wider.

In 2001, low poverty schools spent approximately $270 more per student than high poverty schools. By 2005, schools with the lowest levels of student poverty concentration were spending close to $700 more per student. Since 2004, differences in per student instructional spending between the two lowest student poverty categories increased as well. Nearly $400 separates per student instructional expenditures at the low and med low poverty categories.
Instructional Spending Gaps

An exploration of spending gaps is necessary to determine the extent to which total instructional expenditures vary from neighborhood school to neighborhood school. Two Schools Table 8 demonstrates how instructional spending gaps are calculated. First, we calculate the difference between a school’s average salary and the districtwide salary figure for all elementary school teachers. Second, we multiply the difference by total teachers to calculate the total instructional spending gap. The method used to calculate instructional spending gaps controls for difference in total teachers so that comparisons can be made across schools with different numbers of teachers.

More importantly, this comparison between school-level and districtwide average salaries addresses real spending disparities between schools. Calculating instructional spending gaps using the districtwide average salary figure allows us to impose an average spending salary cap upon every school. In turn, we can determine how much each school spent above or below average spending levels to support instruction. Average teacher salary assumes a central role in these comparisons and is a power indicator of spending equity. Simply stated, schools with average salaries in excess of the districtwide salary figure spend more instructional resources.

Student Poverty, Race and Instructional Spending Gaps

Table 5 displays the distribution of schools with above and below average instructional spending in terms of student poverty concentration and racial/ethnic composition.
Table 5: Student Poverty, Race and Spending Gaps, 2001-2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Schools</td>
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<td>49</td>
<td>50</td>
<td>47</td>
</tr>
<tr>
<td>Low Poverty</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Med Low Poverty</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Med High Poverty</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>High Poverty</td>
<td>47</td>
<td>46</td>
<td>48</td>
<td>47</td>
<td>45</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>97%</td>
<td>97%</td>
<td>96%</td>
<td>96%</td>
<td>96%</td>
</tr>
<tr>
<td>% Students in Poverty</td>
<td>92%</td>
<td>92%</td>
<td>92%</td>
<td>92%</td>
<td>92%</td>
</tr>
<tr>
<td><strong>Above Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Schools</td>
<td>50</td>
<td>49</td>
<td>47</td>
<td>46</td>
<td>39</td>
</tr>
<tr>
<td>Low Poverty</td>
<td>11</td>
<td>11</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Med Low Poverty</td>
<td>18</td>
<td>16</td>
<td>11</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Med High Poverty</td>
<td>6</td>
<td>2</td>
<td>11</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>High Poverty</td>
<td>15</td>
<td>20</td>
<td>16</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>% Students Non White</td>
<td>61%</td>
<td>65%</td>
<td>66%</td>
<td>65%</td>
<td>70%</td>
</tr>
<tr>
<td>% Students in Poverty</td>
<td>58%</td>
<td>61%</td>
<td>63%</td>
<td>64%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Source: PA Department of Education & NCES  Analysis: RfD

Schools with below average instructional spending gaps are disproportionately located in neighborhoods with the highest concentrations of poverty and ethnic minorities, namely African American and Latino. From 2001-2005, some 95% of elementary schools with below average instructional spending gaps were high poverty schools. It is important to note, schools serving the lowest concentrations of poor students did not have below average spending levels.

There appears to be a more even distribution of elementary schools with above average spending across the four poverty categories. High poverty elementary schools account for the largest percentage of schools with above average spending. However, the above distribution across poverty concentrations can be misleading. Nearly 100% of low poverty elementary schools in the District have above average levels of instructional spending, compared with less than 10% of all elementary schools serving the highest concentrations of student poverty. Over 1/3rd of all high poverty elementary schools in the District spend significantly less to support instruction.
Above & Below Average Spending Gaps

Table 6 displays above and below average instructional spending for elementary schools in the four poverty categories. Again, there is a near perfect, inverse relationship between instructional spending (above average expenditures) and concentration of student poverty. As student poverty concentration increases, the level of above average instructional spending decreases. In other words, elementary schools serving lower concentrations of student poverty have a distinct spending advantage.

Table 6: Above Average and Below Average Spending Gaps, 2001-2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Poverty Schools</td>
<td>12</td>
<td>13</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>$3,092,448</td>
<td>$3,121,002</td>
<td>$2,447,143</td>
<td>$1,870,919</td>
<td>$1,402,736</td>
</tr>
<tr>
<td>Med Low Pov Schools</td>
<td>21</td>
<td>23</td>
<td>13</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>$4,512,662</td>
<td>$4,105,297</td>
<td>$2,329,089</td>
<td>$3,697,053</td>
<td>$2,183,151</td>
</tr>
<tr>
<td>Med High Pov Schools</td>
<td>11</td>
<td>8</td>
<td>20</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>$655,433</td>
<td>$259,021</td>
<td>$2,900,916</td>
<td>$2,235,053</td>
<td>$2,744,005</td>
</tr>
<tr>
<td>High Poverty Schools</td>
<td>125</td>
<td>125</td>
<td>127</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>-$5,928,921</td>
<td>-$5,219,990</td>
<td>-$5,862,763</td>
<td>-$5,814,322</td>
<td>-$5,508,145</td>
</tr>
</tbody>
</table>

Source: PA Department of Education     Analysis: RfD

Though the relative spending advantage of low poverty schools and med low poverty schools decreased considerably from 2001 to 2005, this change largely stems from the decreasing number of low poverty schools over the same time period. Similarly, the considerable spending gains within med high poverty schools was bolstered by the addition of 14 schools between 2001 and 2005. Elementary schools with the highest concentrations of student poverty, however, face seemingly insurmountable instructional spending gaps. Over the past five years, marginal decreases in the collective negative spending gap across high poverty elementary schools do not suggest movement towards greater spending equity for students in every school.

A comparison of changes in average spending gaps within each school poverty category brings greater clarity to the issue of instructional spending equity.
<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2005</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Poverty Schools</td>
<td>$257,704</td>
<td>$200,391</td>
<td>-$57,313</td>
</tr>
<tr>
<td>Med Low Pov Schools</td>
<td>$214,889</td>
<td>$198,468</td>
<td>-$16,421</td>
</tr>
<tr>
<td>Med High Pov Schools</td>
<td>$59,585</td>
<td>$109,760</td>
<td>+$50,175</td>
</tr>
<tr>
<td>High Poverty Schools</td>
<td>-$47,431</td>
<td>-$43,371</td>
<td>+$4,060</td>
</tr>
</tbody>
</table>

In terms of the relative spending advantage of individual schools, med high poverty schools saw an increase of over $50,000 in the average spending gap, followed by high poverty schools which saw an increase of $4,000. Interestingly, schools with the lowest poverty concentration lost some $57,000 in average instructional spending gaps between 2001 and 2005, followed by med low poverty schools which lost some $16,000 in average spending per school.

Despite the unexpected shift in spending advantage, these changes did little to affect the influence of school poverty concentration in relation to instructional spending. In 2005, the average low poverty school spent over $200,000 above the average districtwide instructional expenditure, while the average high poverty school spent $43,000 less than average. More importantly, the difference between the average spending gap of elementary schools with the lowest percentage of low income students and the highest percentage of low income students was over $240,000 in 2005.

In 2001, 44 elementary schools spent a combined $8.2 million above the average districtwide instructional expenditure. By 2005, 43 elementary schools spent a combined $6.3 million in excess of the average districtwide spending. In contrast, the 125 elementary schools with the highest concentrations of student poverty spent $5.9 million below the average instructional expenditure in 2001. Four years later, 127 high poverty elementary schools spent $5.5 million less. Suggests declining instructional spending or dollars across all schools, not increased spending equity for Philadelphia’s most needy neighborhood schools.
Since the District does not impose salary caps or similar penalties on schools to hire teachers, low, medium low and medium high poverty schools continue to spend a greater share of District resources on average teacher salaries.

**SIGNIFICANT SPENDING GAPS & NEIGHBORHOOD CONDITIONS**

In the final portion of our analysis of staffing and spending trend data, we address the third research question: What is the relationship between significant spending gaps and neighborhood conditions? We explore significant spending gaps (in excess of $100,000 annually for five consecutive years) across 59 elementary schools in the District; 29 schools with below average spending gaps and 30 schools with above average spending gaps. The distribution of instructional spending gaps is explored in terms of student poverty concentration and select neighborhood catchment variables. Tables and charts are used to describe the relationship between spending gaps and (a) median home price, aggravated crime rate and burglary rate; (b) average salary; (c) per pupil spending; and (d) student test scores.

**Defining Significant Spending Gaps**

Two factors were used to make determinations of significant instructional spending gaps. First, we identified those schools with above and below average spending gaps in excess of $100,000 annually. Second, we pulled out those elementary schools with spending gaps in excess of $100,000 for each of the five years (2001-2005). Only elementary schools meeting both of these criteria were considered in our analysis of significant spending gaps.

The purpose of this section is to better understand the relationship between neighborhood characteristics and significant instructional spending gaps. We expect that high performing schools in wealthier neighborhoods will have positive spending gaps. By comparison, we expect that low performing
schools in low income and minority neighborhoods will have negative spending gaps. We focus our analysis on schools with significant spending gaps because these schools arguably have the most inequitable spending patterns in the District. The following table lists elementary schools identified as having significant above and below average instructional expenditures.

**Elementary Schools with Significant Spending Gaps**

<table>
<thead>
<tr>
<th>ID #</th>
<th>School Name</th>
<th>Academic Region</th>
<th>ID #</th>
<th>School Name</th>
<th>Academic Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>142</td>
<td>Alcorn</td>
<td>South</td>
<td>0</td>
<td>Comly</td>
<td>Northeast</td>
</tr>
<tr>
<td>83</td>
<td>Blaine</td>
<td>Central</td>
<td>68</td>
<td>Cook Wissahickon</td>
<td>Northwest</td>
</tr>
<tr>
<td>120</td>
<td>Bluford</td>
<td>West</td>
<td>2</td>
<td>Decatur</td>
<td>Northeast</td>
</tr>
<tr>
<td>168</td>
<td>Catharine</td>
<td>Southwest</td>
<td>41</td>
<td>Edmonds</td>
<td>Northwest</td>
</tr>
<tr>
<td>139</td>
<td>Comegys</td>
<td>Southwest</td>
<td>15</td>
<td>Farrell</td>
<td>Northeast</td>
</tr>
<tr>
<td>86</td>
<td>Cramp</td>
<td>Central East</td>
<td>3</td>
<td>Fitzpatrick</td>
<td>Northeast</td>
</tr>
<tr>
<td>171</td>
<td>Douglass</td>
<td>Central</td>
<td>11</td>
<td>Forrest</td>
<td>East</td>
</tr>
<tr>
<td>31</td>
<td>Edmunds</td>
<td>East</td>
<td>14</td>
<td>Fox Chase</td>
<td>Northeast</td>
</tr>
<tr>
<td>89</td>
<td>Elkin</td>
<td>Central East</td>
<td>6</td>
<td>Frank</td>
<td>Northeast</td>
</tr>
<tr>
<td>60</td>
<td>Fulton</td>
<td>Northwest</td>
<td>5</td>
<td>Greenberg</td>
<td>Northeast</td>
</tr>
<tr>
<td>163</td>
<td>Harrity</td>
<td>Southwest</td>
<td>141</td>
<td>Greenfield</td>
<td>South</td>
</tr>
<tr>
<td>82</td>
<td>Hill</td>
<td>Central</td>
<td>4</td>
<td>Hancock</td>
<td>Northeast</td>
</tr>
<tr>
<td>111</td>
<td>Kelley</td>
<td>Central</td>
<td>57</td>
<td>Henry</td>
<td>Northeast</td>
</tr>
<tr>
<td>73</td>
<td>Kenderton</td>
<td>Central</td>
<td>8</td>
<td>Holme</td>
<td>East</td>
</tr>
<tr>
<td>102</td>
<td>Ludlow</td>
<td>Central East</td>
<td>55</td>
<td>Houston</td>
<td>Northwest</td>
</tr>
<tr>
<td>33</td>
<td>Marshall</td>
<td>East</td>
<td>54/56</td>
<td>J.S. Jenks</td>
<td>Northwest</td>
</tr>
<tr>
<td>147</td>
<td>McDaniel</td>
<td>South</td>
<td>158</td>
<td>Key</td>
<td>South</td>
</tr>
<tr>
<td>166</td>
<td>Mitchell</td>
<td>Southwest</td>
<td>123</td>
<td>Lambertton</td>
<td>West</td>
</tr>
<tr>
<td>112</td>
<td>Morris</td>
<td>Central</td>
<td>27</td>
<td>Lawton</td>
<td>East</td>
</tr>
<tr>
<td>46</td>
<td>Morrison</td>
<td>North</td>
<td>1</td>
<td>Loesche</td>
<td>Northeast</td>
</tr>
<tr>
<td>87</td>
<td>Munoz-Marin</td>
<td>Central East</td>
<td>148</td>
<td>McCall</td>
<td>South</td>
</tr>
<tr>
<td>88</td>
<td>Potter Thomas</td>
<td>Central East</td>
<td>42</td>
<td>McCloskey</td>
<td>Northwest</td>
</tr>
<tr>
<td>113</td>
<td>Reynolds</td>
<td>Central</td>
<td>149</td>
<td>Meredith</td>
<td>South</td>
</tr>
<tr>
<td>85</td>
<td>Sheridan</td>
<td>Central East</td>
<td>20</td>
<td>Moore</td>
<td>Northeast</td>
</tr>
<tr>
<td>30</td>
<td>Smedley</td>
<td>East</td>
<td>170</td>
<td>Penrose</td>
<td>Southwest</td>
</tr>
<tr>
<td>157</td>
<td>Southwark</td>
<td>South</td>
<td>16</td>
<td>Rhwahhurst</td>
<td>Northeast</td>
</tr>
<tr>
<td>93</td>
<td>Webster</td>
<td>Central East</td>
<td>98</td>
<td>Richmond</td>
<td>Central East</td>
</tr>
<tr>
<td>94</td>
<td>Willard</td>
<td>Central East</td>
<td>65</td>
<td>Shawmont</td>
<td>Northwest</td>
</tr>
<tr>
<td>63</td>
<td>Wister</td>
<td>Northwest</td>
<td>17</td>
<td>Solis-Cohen</td>
<td>Northeast</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>18</td>
<td>Spruance</td>
<td>Northeast</td>
</tr>
</tbody>
</table>
**Geographic Region and Segregation Status**

**Below Average Instructional Expenditures:** 29 elementary schools had significant, negative spending gaps. Over half of these schools are clustered in the Central (8 schools) and Central East (7 schools) Regions of the District. Eleven of 29 schools, or 38%, were managed by an external provider, also known as an Educational Management Organization (EMO).

Eighteen Highly Segregated Schools: Sixteen schools, or 55%, were among the most highly segregated African American schools in the District. One school serves a highly segregated Latino student population and another has one of the highest concentrations of Asian enrollment in the District (2002-2003).

**Above Average Instructional Expenditures:** Thirty elementary schools had significant, positive spending gaps. Nearly half of these schools were clustered in the Northeast Region (13 schools); a smaller concentration of schools are clustered in the Northwest Region (7 schools). Only one of the 30 elementary schools with significant spending advantages was run by an EMO.

Seven Highly Segregated Schools: Five of thirty schools were among the most highly segregated African American schools in the District. Two schools served the highest concentration of Asian students in the District (2002-2003).

**Median Sale Price, Aggravated Crime & Burglary Rates**

Table 7 shows the distribution of property values and crime rates across elementary schools with significant instructional spending gaps.
Table 7: Select Property and Crime Trends and Significant Spending Gaps

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Median Sale Price</td>
<td>$22,251</td>
<td>$25,930</td>
<td>$30,257</td>
<td>$39,327</td>
<td>$46,065</td>
</tr>
<tr>
<td>Aggravated Assault Rate/1,000</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Burglary Rate/1,000</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td><strong>Above Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Median Sale Price</td>
<td>$90,628</td>
<td>$103,447</td>
<td>$122,057</td>
<td>$151,368</td>
<td>$193,598</td>
</tr>
<tr>
<td>Aggravated Assault Rate/1,000</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Burglary Rate/1,000</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td><strong>Citywide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Median Sale Price</td>
<td>$49,378</td>
<td>$60,007</td>
<td>$69,372</td>
<td>$85,541</td>
<td>$105,305</td>
</tr>
<tr>
<td>Aggravated Assault Rate/1,000</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Burglary Rate/1,000</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Cartographic Modeling Lab, UPENN

Elementary schools with significant, below average instructional spending gaps were located in neighborhoods with some of the lowest median residential sale prices in the City. Homes in these communities sell for less than half the citywide median residential sale price. Conversely, the median home values in neighborhoods with significant, above average instructional spending are almost double the citywide median price.

Elementary schools with the most disparate spending gaps also experienced elevated rates aggravated assaults and burglaries. The violent crime rate is at-least 2 to 3 times higher in these neighborhoods when compared to the rate in neighborhoods with significant instructional spending advantages. The property value and crime data suggest instructional spending disparities disproportionately affect some of the City's most disadvantaged neighborhoods.

**Teacher Salary & Significant Spending Gaps**

Table 8 shows the relationship between average teacher salary and instructional spending gaps.
### Table 8: Average Teacher Salary and Significant Gaps

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Teacher Salary</td>
<td>$43,578</td>
<td>$44,930</td>
<td>$45,466</td>
<td>$49,864</td>
<td>$50,940</td>
</tr>
<tr>
<td><strong>Districtwide</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Teacher Salary</td>
<td>$48,527</td>
<td>$50,268</td>
<td>$51,356</td>
<td>$55,463</td>
<td>$56,319</td>
</tr>
<tr>
<td><strong>Above Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg Teacher Salary</td>
<td>$54,622</td>
<td>$56,325</td>
<td>$57,709</td>
<td>$61,985</td>
<td>$62,247</td>
</tr>
</tbody>
</table>

Source: PA Department of Education  
Analysis: RfD

Instructional funding gaps are related to average teacher salary. Negative, or below average instructional spending gaps, are associated with below average (districtwide) teacher salaries. From 2001-2005, the difference in average teacher salary between schools with significant spending gaps was over $11,000. The differential in average teacher salary is largely explained by the concentration of teacher experience. In schools with significant positive spending gaps, the average elementary teacher had 19 years experience compared with 9 years experience in schools with significant spending disparities.

**Total and Average Instructional Spending Gaps**

Table 9 displays total instructional spending gaps and average spending gaps for schools with significant instructional spending gaps.

### Table 9: Total and Average Spending Gaps

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Below Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>-$10,567,118</td>
<td>-$10,014,218</td>
<td>-$9,794,469</td>
<td>-$10,235,599</td>
<td>-$8,820,802</td>
</tr>
<tr>
<td>Average Spending Gap</td>
<td>-$211,342</td>
<td>-$208,630</td>
<td>-$199,887</td>
<td>-$204,712</td>
<td>-$187,677</td>
</tr>
<tr>
<td><strong>Above Average Spending</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Spending Gap</td>
<td>$11,232,642</td>
<td>$10,345,363</td>
<td>$9,802,395</td>
<td>$10,552,395</td>
<td>$8,192,440</td>
</tr>
<tr>
<td>Average Spending Gap</td>
<td>$224,652</td>
<td>$211,129</td>
<td>$208,562</td>
<td>$229,400</td>
<td>$210,063</td>
</tr>
</tbody>
</table>

Source: PA Department of Education  
Analysis: RfD

Table 9 illustrates that given limited financial resources to hire teachers, the only way some schools can spend significantly more on teacher salaries is if an equal number of other schools spend significantly less. In 2005, for example, the 30
elementary schools with positive spending gaps spent nearly $8.2 million above the districtwide instructional expenditure. Conversely, some $8.8 million was not spent on instruction in 29 disadvantaged neighborhood schools. Chronic disparities in staffing (teacher experience) and spending (teacher salary) prevent elementary schools in high poverty, high minority neighborhoods from providing equal access to equitable instructional spending.

**Instructional Spending Gaps and Per Pupil Expenditures**

Graph 3 uses trend lines to describe differences in per pupil instructional spending.

![Graph 3: Instructional Spending Per Pupil](image)

The trend lines strongly suggest that instructional spending disparities disproportionately affect students living in poverty. The inequitable distribution of instructional dollars per pupil are most pronounced in elementary schools with significant spending gaps. On average, the over resourced elementary schools spend $600 more per student than under resourced elementary schools. The trend lines do not suggest movement towards greater resource equity between elementary schools. The gap in per pupil instructional spending has not narrowed over the past five years.
**Significant Spending Gaps and Student Achievement**

The final graph in this chapter examines significant spending gaps in relation to student achievement scores. Graph 4 compares the percentage of 5th graders in the selected schools with Proficient and Advanced PSSA Reading Scores.

The trend lines indicate that disparities in instructional spending were related to gaps in student achievement. Students attending elementary schools with significant resource capacity outperform students attending elementary schools with the most inequitable spending patterns in the District. In 2005, 50% of students in over resourced elementary schools achieved reading proficiency or excellence.

In contrast, only 25% of students in under resourced schools achieved this same level of performance. While some may dispute the relative importance of instructional spending on student test scores, these analyses raise cause for alarm. Less money is being spent on instruction in disadvantaged neighborhood schools. If we accept that low test scores are an indication of student learning
needs, then we must also accept that we are diverting valuable instructional resources from the students with the greatest need.

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