

ACADEMIC PERFORMANCE, CHARACTERISTICS AND EXPENDITURES
IN NEW YORK CITY ELEMENTARY AND MIDDLE SCHOOLS

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I. Introduction

The academic performance of New York City elementary and middle school students varies widely across grades and schools, as do the characteristics of students, teachers and the expenditures allocated to the schools. In this study we examine these variations, documenting the differences in the characteristics of the students and teachers and the pattern and level of expenditures between low, middle and high performing schools at the elementary and middle school level. We report averages of student, teacher and expenditure variables for each level of performance, using two performance measures. The purpose is to paint a statistical portrait of New York City's high, middle and low performing schools in order to gain insight into the similarities as well as the differences between them. These differences need to be interpreted with caution because of the difficulty of distinguishing the causes and effects of performance on the one hand and characteristics and expenditures on the other hand. This work lays the foundation for future work that will seek to disentangle the factors determining the differences in the academic performance of these schools. We examine the results of our analyses to draw out the implications for policymakers where possible and to gain insight into directions for the future work.

This study only became possible quite recently. Four years ago New York City began producing annual school-based budget and expenditure reports, which detail school-level

spending. Combining those reports with the existing annual student-level report card data, we are able to examine the level and pattern of school academic performance, characteristics, and resources across New York City's public elementary and middle schools. The large size of the New York City school district and the wide range of students, teachers, and schools make this effort particularly important. While most districts in the state and country have about five schools (typically one high school, one or two middle schools and two or three elementary schools), New York City has roughly 880 elementary and middle schools and more than 200 high schools. Further, with more than 1.1 million students enrolled, New York City public schools educate roughly a third of the students in New York State and more children than are enrolled in public schools in 46 other states. The large number of children and schools in this district makes it particularly important to understand the differences between low and high performing schools, to gain insight into how to effect changes in outcomes, and to improve the academic performance across the board.

II. Data

Sources

This study primarily relies on two sources of 1997-98 school-level data published by the New York City Board of Education (BOE): *School Based Expenditure Reports* (SBER) and *Annual School Reports* (ASR). The SBER provide rich and detailed data on school-level spending. They categorize all school spending by function (classroom instruction, district costs, etc.),¹ by student type (general education, part and full-time special education)², by source of

¹ There are 45 detailed functional categories of spending and 15 summaries of the detailed functions. The functions are categorized by three broad groupings; i) direct services to schools, ii) district/superintendency costs, iii) system-wide costs. Further categorization occurs within each of these three groups. For example, the direct services to schools grouping reflects spending on classroom instruction, instructional support, and other functions. Another

funds (city funds plus state operating aid and federal, state and private grants)³ and by object (salaries, fringe benefits, and other than personal services). The ASR provide school-level data on student and teacher characteristics and student academic performance. In addition to these two sources, the study uses data obtained directly from the BOE to augment measures of school-level student performance on citywide reading and mathematics exams. Table II A presents descriptive statistics on all variables used in the report and Table II B shows the variable name, description and source of each variable.

Student Performance

Student performance on New York City's reading (CTB) and mathematics (CAT) standardized exams are reported for 3rd through 8th grades for each school. The BOE includes data on the number of students for whom a test form has been prepared and the number of students actually taking the test.⁴ Thus, the percentage of students taking the exam is calculated by dividing the number taking the test by the number of forms prepared. The BOE reports scores in a number of ways; we use Normal Curve Equivalents (NCEs), whose technical characteristics are explained in the methods section. In addition, since the BOE reports the number and proportion of students in each of four quartiles of performance, this study combines the figures for the two highest quartiles to report the percent of students at or above the 50th percentile. As Table II A shows, across all schools with a third grade, on average 88% of a school's third grade students took the reading test and those students had an average NCE score of 51. (All numbers

level of functional detail is available as well, for example classroom instruction is a sum of expenditures on teachers, textbooks, professional development and other.

² Part-time special education students are a sub-set of general education students who are in need of resource room-type services.

³ Federal, state and private grants sources are further identified by the specific grant or type of grant, such as federal Title I or private foundations.

are rounded to two digits in this discussion although not in Table II A.) Nearly 52% of third grade test takers scored at or above the 50th percentile. In order to analyze student performance across all grades for elementary and middle schools, the detailed data by grade are combined into an *all grades* school number. Thus, on average 91% of the students in all grades in a school took the reading exam and on average half of test takers in all grades (3rd through 8th) scored at or above the 50th percentile.

Special Education

Students in special education have been identified as in need of modified instructional settings. These students alternatively are referred to as full-time special education students. Depending on sub-district and school practice, full-time special education students may spend part or most of their day in general educational settings, or they may be in their own classrooms. On average over 6% of students in elementary and middle schools are classified as special education students. The range across schools is quite wide, from 0% to 38% of all students in a school. Students in general education programs who have been identified as in need of resource room-type services, alternatively referred to as resource room or part-time special education students, spend most of their day in general education settings.

Socioeconomic Variables

The ASR school-level data include information on student demographic and socioeconomic characteristics. The race/ethnicity of students is reported in four groups; white, black, Hispanic, and Asian/Pacific Islander. On average, elementary and middle schools are 17% white, 36% black, 37% Hispanic and 10% Asian students. Nearly 49% of students in

⁴ Students who did not take the exam fall into three reported categories, i) absent, ii) excused, iii) exempt.

elementary and middle schools are female and nearly 8% have immigrated to the United States within the past three years. Approximately 75% of elementary and middle schools students are poor, as measured by whether a student is eligible for free or reduce priced lunch. Nearly 16% in the average school are identified as having limited English proficiency (LEP).

Teacher Characteristics

The ASR is the source of information on teacher characteristics and the SBER is the source of information on average teacher salaries and expenditures. Teacher characteristics such as licensure and type of assignment, stability, experience and education are reported as proportions in dichotomous terms. For example, teacher experience is reported as the percent of teachers in a school who have been teaching anywhere for five or more years (62%) and not as the average number of years of experience. The average teacher salary for each school is derived from information on the number of teachers and teacher expenditures as reported in the SBER and other information provided by the BOE's division that prepares the SBER. The additional information on teacher expenditures further classifies spending in terms of salaries for full-time equivalent teacher positions, salaries paid to teachers for using their prep periods, and amounts paid to per session or per diem substitute teachers. The average teacher salary in elementary and middle schools is \$43,257.

Resources

As mentioned above, the SBER are quite detailed and allow for the reporting of a wide variety of resource measures. The groups of measures described in this section rely on a basic understanding of the student counts and classifications. Restating what has been described above and in a footnote, the SBER provide student counts for three types of students; general

education, part-time special education and full-time special education. Part-time special education students are a subset of general education students. Thus, the total number of students in a school is equal to the sum of general education students and full-time special education students.

The first resource measure that is presented in Table II A is the pupil-teacher ratio. As explained later in the report, this is NOT a measure of class size, rather it is calculated as the sum of all students (general education plus full-time special education) divided by the total count of full-time equivalent teacher positions. This definition highlights the limitations of the data. Ideally one would like to sort out the general education teachers from the special education teachers because class size regulations vary for the two groups of students and may even vary within the full-time special education population of students. But the requisite breakdown of teachers is not included in the SBER, therefore we aggregate all students and divide by all teachers.

As alternative measures of resources, a variety of per pupil expenditures are analyzed in this report. While there is limited flexibility with the SBER data in matching teachers and student types, there is more flexibility in matching expenditures on the basis of student type. Overall spending per pupil is a combination of spending on direct services to schools, including teachers, textbooks, and building services, and district and systemwide costs and obligations, such as administrative overhead and debt service. Therefore, a subset of the functional details within the three broad areas of spending are presented as well.

The first set of per pupil expenditures represents spending for all students in a school. On average \$8,359 is spent per pupil. This per pupil spending figure combines resources spent on

general education, part-time special education and full-time special education students. It overstates spending on the majority of students, those who are in general education, and understates spending on the minority of students, those who are in full-time special education, because these two particular types of students have radically different spending on a per pupil basis. For example, spending per full-time special education student averages \$21,812 for elementary and middle schools while spending per general education student averages \$7,017. While resources for special education students may be used on behalf of all students, in this particular analysis we cannot control for differential rates of special education students and differential costs of the varying needs of special education students. Therefore, per pupil expenditures for the different types of students are reported as well.

Breaking down the \$7,017 per pupil expenditure for the general education student, \$6,210 is spent on direct services with \$4,066 on classroom instruction. The great majority of classroom expenditures are on teachers (\$3,523 per pupil). While spending on other classroom instruction categories, such as educational para professionals (\$164), text books (\$74), and professional development (\$108) are significantly less than that on teachers, it is important to understand how schools and their sub-districts are spending resources.

Because a sub-set of general education students are in need of and receive resource room services, spending per general education student understates the amount of resources spent on their behalf. There are at least two different ways to conceptualize spending that incorporates resources spent on part-time special education students. First, expenditures on behalf of the general education students, who are also in part-time special education, are spread across all general education students. While a large majority of general education students are not

identified as in need of resource room services, spreading the part-time special education expenditures across all general education students gives a measure of resources available for a body of general education students that may vary in needs across schools. Essentially, the full-time special education students and spending on their behalf are excluded. The average per pupil expenditure with part-time special education resources per general education student is \$7,506 with \$6,663 on direct services. Second, expenditures on behalf of part-time special education students are calculated per part-time special education student and are added to the basic general education expenditure per general education student. This measure represents the total amount spent on behalf of a general education student who is also in part-time special education, assuming that expenditures on part-time special education are spent only on behalf of those students. The per pupil expenditure is \$14,635 with \$13,294 on direct services. These figures are far below that of full-time special education students and double that of spending per general education student.

In the case of part-time and full-time special education students, a significant proportion of per pupil expenditures are for instructional support services, such as referral and evaluation services, and ancillary support services, such as transportation. The per pupil expenditures on teachers for special education students is higher than those for general education students, because of the more stringent class size limitations in special education settings.

Student Counts

Each of the two main sources of data, SBER and ASR, provide student counts by similar categories of general education, part-time special education or resource room, and full-time special education. The per pupil expenditures are calculated using the student counts in the

SBER database and the socioeconomic characteristics are calculated using the student counts in the ASR. Therefore, we report descriptive statistics for both sets of student counts in Table II A and in the results tables, Tables V A and V B. On average, elementary and middle schools have 870 students with the smallest school having 66 students and the largest having 2,671 students, according to the SBER data. Even though the two sources of data draw student counts from the same information system at the BOE, there are differences that may be the result of the timing of the data collection. The differences for the most part are more pronounced in the count of general education students. Across both sources of data, each school has an average of approximately 50 students in part-time special education and 50 students in full-time special education.

III. Methods

The first step in examining differences in the characteristics and expenditures of schools by performance level is to identify a method for dividing schools into performance groups. These groupings require decisions about which performance measures to use, how many different performance groups to use, whether performance measures can be combined and whether grades can be combined into schools. We discuss each of these issues and its resolution below.

Choosing Performance Measures

Performance at the elementary and middle school level is a multi-dimensional concept that can include measures such as test scores, promotion rates, attendance rates, and, conceptually, more qualitative evaluations by adults of pupil progress. For the purposes of this report we focus on scores on New York City's reading (CTB) and mathematics (CAT) tests,

which are given to third through eighth graders each spring. While test scores have some deficiencies as performance indicators, it is important to use measures that are available and reasonably consistent for the majority of schools and students in each grade across the city. In this report we use levels of scores and not changes in the scores or value added measures.

Test scores can be reported at the school level in a variety of ways - raw scores, percentiles, grade equivalents and Normal Curve Equivalents (NCEs). Median scores, mean scores, or even percentage passing can be used. In these analyses, we use the average NCEs for each school, which are available since the reading and math tests are norm-referenced. NCEs are an accepted way to convert raw scores into a scale with equal intervals between scores. For example, the “distance” between an NCE score of 50 and 51 is the same as between a score of 75 and 76. That is, the increase in performance indicated by a one point increase in an NCE score is the same whether the increase is from 50 to 51 or from 75 to 76. In contrast, the distance between the 50th and 51st percentile is smaller than between the 75th and 76th percentile. This is because more students are clustered around the 50th percentile and thus it does not take as large an increase in the score interval to encompass an additional one percent of students as it takes at the 75th percentile, where there are fewer students clustered. NCE intervals do not contain equal percentages of students; rather the intervals are constant and the percentage of students in each interval varies. This feature of equal intervals allows analysts to manipulate the scores mathematically (aggregate across students, calculate averages and standard deviations, for example) and compare scores across schools, without violating critical statistical properties of the resulting summary statistic.

Defining High, Average, and Low Performing Schools

Based on the NCEs for math and reading, we assessed different ways to divide schools into performance groups. The essential question is: How many different groups will the data support, given that we need to have a reasonable number of schools in each to calculate the average values of characteristics and expenditures? Groups also need to be different enough to support inferences that the mean performance of the schools differs across groups. We looked for any natural breakpoints (places where there were gaps between scores) and found none. We tried using the national standard deviation for the NCEs for individual students (21.06) to divide schools by standard deviations, but found very few schools in either the high or low performing tails because the New York City grade and school standard deviations are much lower (around 8.7 to 12). This is not surprising since our analyses do not use individual student data, but rather data aggregated to grade and school NCE. We settled on use of the New York City grade or school standard deviations of NCEs to form three performance groups for each grade or school and test, based on schools whose mean NCE fell more than one standard deviation in either direction (positive or negative) from the mean NCE. Thus, *high performing* schools are those whose mean NCE score is greater than one standard deviation from the mean NCE, *low performing* schools are ones whose mean NCE score is less than one standard deviation from the mean NCE, and *middle performing* schools are ones whose mean NCE score falls in between plus and minus one standard deviation from the mean NCE.

Combining Tests and/or Grades

Using standard deviations of NCEs for reading and mathematics tests in order to group schools, we then analyzed whether we could combine the two tests and the grades (or alternatively use just one test and one grade as representative of an all tests and grades). In order

to use just one test or grade, we would need to be confident that there is high agreement between tests and between grades. We found that while the correlations in NCE scores were relatively high, we were not confident that they are high enough for us to obtain the same categorizations of schools if we chose just one test and one grade. Our analyses involved calculations of the Pearson bivariate correlations between NCEs for each pair of tests (reading and math) at a grade level and then for pairs of different grade levels for each test. We also constructed tables to show the amount of agreement in the classification of schools by alternative tests at the same grade and by the alternative grades for the same test, again using the standard deviations to divide schools into three performance groups. Table III A shows an example of these comparisons. The top part of the table illustrates the correlation and agreement in classifications using third grade reading and math scores. The correlation, .899, while high for many purposes, in our judgment is not high enough to warrant saying the two tests give the same information. The table shows the number of schools that would be classified the same and differently using the two scores. The diagonals illustrate schools falling in the same classification and the off-diagonals illustrate the number of schools classified differently by the two tests. The table shows that there are significant numbers of schools on the off-diagonals, supporting our conclusion that the correlations between tests are not high enough to simply use one or the other of them.

The bottom part of the table shows the agreement between reading tests in the 3rd and 5th grades. Again the correlation is not extremely high for the purposes of classification and the table shows significant disagreements in classifications of schools.

Correlations between tests in other grades and the same tests across different grades are not exactly the same as ones shown in Table III A, but result in the same conclusions. We cannot *a priori* eliminate any tests or grades in our efforts to classify schools. Because the use of two tests and eight grades will lead to many tables of results and because New York City classifies its schools into elementary and middle schools, we have added two aggregations that correspond to the New York City classifications of schools. We show groups of schools based on the reading and math scores, averaged at the elementary and middle school levels. In addition to the need to average over grades, not all schools classified as one type contain the same grade spans. We ignore this latter problem for these classifications and adopt the New York City labels for what is an elementary and what is a middle school, no matter what the grade spans are in particular schools.

Weighting Averages or Not

A final methodological consideration involves how the averages for the characteristics and the expenditures will be calculated for each performance group. To be more concrete, given performance groups based on 3rd grade reading scores, we calculate the average percent of students in special education, the average percent of teachers who are licensed, the average teacher salary etc. There are two ways to calculate these averages – unweighted and weighted. If we calculate a simple unweighted average – add up all the values in the group and divide by the number of schools – we will obtain an “average school” number. On the other hand, if we weight each number for each school by the number of students in the school, and then divide by the number of students, we will get an “average student” number. This latter number will weight

the larger schools more heavily. Because the two may present different patterns and because *a priori* one choice is not clearly the right one, we calculate both.

How many tables will our methodological choices produce? Table III B shows that the answer is 32. There are six grades (3 to 8) and two levels of schools (elementary and middle); there are two tests and two ways to calculate mean values. As the table shows, combining the alternatives leads to 32 tables. While this represents the universe of possibilities, it is not useful because there are too many results to discuss meaningfully in this report. In the results sections, we therefore discuss the results by elementary and by middle schools based on their aggregated performance in reading, using unweighted averages for characteristics and expenditures. All other tables of results are in the appendices and their data will be used in future studies.

Although individual schools are classified differently depending upon test and grade used for classification, the mean values of student and teacher characteristics as well as of expenditures across performance levels do not vary much by test or grade in their general pattern. (Magnitudes may vary and there are some exceptions.) Thus, when discussing empirical results, we analyze aggregate elementary and middle school reading results as a way of reducing a large volume of data to some understandable, interesting and important findings.

IV. Conceptual Issues

As described above, our analysis includes variables describing characteristics of the students, characteristics of teachers, and patterns of expenditures and resources allocated to the schools. These variables were chosen because previous empirical research or theory suggest that they are related to school performance – either because they are thought to influence performance or because they are thought to be determined by performance. In many cases

‘theory’ suggests that the direction of causality can go either way. More specifically, we can describe three general pathways through which these variables are related to performance. First, the variable might affect performance directly – as an example, smaller pupil-teacher ratios might lead to better classroom interactions and better performing students. Second, the variable might be itself determined by performance – as an example, better performing schools may be more engaging (demanding) for students and might lead to higher attendance or, alternatively, the school district may target more resources at lower performing schools in an effort to boost performance in successive years. Finally, the relationship might be driven by ‘school selection’ by parents, by students or by teachers. To the extent that they choose between schools, parents, students and teachers of different types may sort themselves into school communities that are significantly different from one another. If they choose based upon school performance, there will be differences by performance level. Thus, if non-poor parents have more flexibility in choosing schools, their choices will contribute to a higher concentration of non-poor students in high performing schools. Alternatively, if more experienced teachers have more flexibility and prefer high performing schools, these schools will have higher concentrations of experienced teachers. The analyses in this study cannot disentangle the direction of causality, or the effects of selection. Instead, we try to gain some insight into the magnitude and importance of different effects.

V. Empirical Analysis

As noted above, the analyses here are based on tables of elementary and middle school reading performance, presented in Tables V A and V B.

Socioeconomic Characteristics of Students

Our data include some information on the demographic backgrounds of the students in addition to variables that describe the special educational needs of students.

There is a great deal of existing research that has investigated the relationship between demographic characteristics and school performance and some of the empirical findings are disturbing. The results of previous studies would suggest that students in low performing schools will be disproportionately black, Hispanic, poor, limited English proficient and have higher mobility and lower attendance; high performing schools will be disproportionately Asian and white, and have less poverty, fewer limited English proficient children, and better attendance. Unfortunately, these patterns emerge quite strongly from our analysis of New York City's schools.

Before turning to the results of specific analyses, we should point out one overarching finding. With relatively few exceptions, the values of the analyzed variables consistently (monotonically) increase or decrease with performance. As an example, attendance is lowest in the low performing schools, somewhat higher in middle performing schools, and highest in the high performing schools. While this is not evidence of causality, it does suggest the relationship between performance and these variables is consistent and stable.

Elementary Schools

Beginning with the performance of elementary schools in reading (Table V A), the racial and demographic composition of high, low and middle performing schools differ markedly. While the low performing schools are roughly half black and half Hispanic (only 2% of the students are Asian and 1% white), high performing schools are roughly half white, 13% black,

17% Hispanic and 19% Asian. As expected, poverty is more prevalent in the lowest performing schools where almost 94% of the students are eligible for free or reduced price lunch. It is noteworthy, however, that poverty is common in even the high performing schools, where almost 40% of the pupils are eligible for free or reduced price lunch. Roughly 21% of the students in low performing schools are limited English proficient (LEP), only slightly higher than the 17% in middle performing schools, but these are significantly higher than the 11% in the high performing schools. The distribution of recent immigrants is interesting – low performing schools have the smallest representation at 5% while high and middle performing schools are roughly 8.3% recent immigrants.

Middle Schools

Middle schools classified by reading performance show similar demographic patterns (Table V B). High performing schools have more whites and Asians, low performing schools more blacks and Hispanics, but the differences across performance levels are less pronounced than in elementary schools. That is, high performing middle schools are roughly 38% white, compared to 51% in elementary schools. Again, representation of children with limited English proficiency and the representation of poor children decline with performance. Interestingly, while elementary schools are consistently 48 or 49% female, in middle schools, the percentage female increases with performance from a low of approximately 47% in the low performing schools to a high of approximately 52%. (Note that this pattern, although not the magnitude, is the same in the analyses based on performance on math tests. See Appendix Table 2.) Representation of recent immigrants in middle performing middle schools is about the same as it

is in elementary schools, although representation is notably lower in the high performing schools and higher in the low performing schools.

Special Education

Research on special education offers myriad and conflicting suggestions about why and how schools place students in special education. These decisions, in turn, may affect academic performance. One possibility is that more special education students might reflect more children with special needs in the school community. Alternatively, special education enrollments could reflect a greater propensity to classify children as needing special education – possibly in an effort to separate ‘disruptive’ children from regular classrooms. At the same time, parents and teachers in some schools may be quicker to identify mild learning disabilities and direct children into resource rooms where parents and teachers in other schools identify these disabilities only when they become more severe and the children end up in full time special education. Maybe the school has a special education program that serves a number of schools in the community school district. These are only some of the many forces that may drive differences in special education across schools.

Our analysis reveals a higher percentage of children in full-time special education in the lowest performing elementary and middle schools; the percentage declines with performance. Referrals follow a similar pattern. In elementary schools, representation of children in resource room does not follow the pattern, however (Table V A). More children are receiving resource room services in high performing schools (6.23%) than in middle (5.85%) or low performing schools (5.49%). In middle schools, the pattern differs again (Table V B). The highest

percentage of students receiving resource room services are in middle performing schools, while the lowest percentage are in high performing schools.

Attendance

Our analysis includes two attendance variables – average daily attendance (ADA) and percent of students in the same school for the whole year, which is a measure of student mobility. Low performing schools have the lowest ADA, and the lowest percentage of students remaining in the school for the entire school year and both are significantly lower than the values in high performing schools.

Characteristics of Teachers

Our analyses reveal a consistent pattern in the distribution of teacher characteristics across performance levels. On average, low performing schools have the fewest teachers who are licensed and permanently assigned to the school, who have been in the particular school for two or more years, who have five years or more of previous teaching experience, or who have a master's degree or higher. All of these are highest in the high performing schools; middle performing schools fall somewhere in between. Since these are the factors that trigger salary increases according to the terms of the teachers' contract, average teacher salaries follow suit. Interestingly, teacher attendance also follows a similar pattern – teachers in low performing elementary schools average 8.5 days absent each year; their colleagues in high performing elementary schools average 7.7 days absent. Again, this analysis cannot reveal whether these relate to the *cause* of low performance, or are a *result* of more difficult conditions in low performing schools.

Our data also include information on additional salary spending by the schools – prep period salary per teacher and ‘other’ salary per teacher. While interpreting this is particularly difficult, one noteworthy pattern is that low-performing schools spend more on prep period salary per teacher – essentially indicating that teachers in low performing schools are more likely to spend their prep periods working for extra salary. This may be because teachers in low performing schools are absent more frequently, because it is difficult to draw substitute teachers to low performing schools, or because teachers in low performing schools are more easily drawn into forgoing their prep periods for pay; we cannot distinguish the reasons from these patterns in the data.

Expenditures and Resources

Beginning with the pupil/teacher ratio, it should be noted that this is NOT the same as average class size and there may be a significant difference between these. Our analysis indicates that high performing schools have significantly higher pupil-teacher ratios – low performing schools in elementary reading tests have a pupil-teacher ratio of approximately 14.2 compared to almost 17.5 for high performing schools. The disparity is greater in middle schools (12.7 versus 17). Spending per pupil follows the opposite course. Low performing schools receiving significantly more funding than high performing schools overall. (See TOTAL spending per pupil – ALL in Table V A.) Spending in low performing elementary schools averages \$9,136 while spending in the high performing schools is \$1,220 per pupil *lower* at \$7,916. The divergence is more profound in middle schools – spending in low performing middle schools is \$10,305 while high performing middle schools receive only \$7,622.

One explanation for this might be that low performing schools get more resources because of the higher representation of special education students. Unfortunately, the data suggest this is not the explanation. The same pattern (although not magnitude) is observed in an analysis of general education expenditures for general education students. Table V A (elementary schools) shows that the difference in TOTAL spending per pupil – GE ONLY is \$7,421 versus \$6,579 or \$842. The implication is that the higher average salaries of teachers in high performing schools is less important in driving disparities in overall spending than the lower pupil-teacher ratio in low performing schools. Note, however, that low performing schools also spend more on almost everything - education paraprofessionals, textbooks, librarians and library books, and professional development.

Incorporating the expenditures on part-time special education for general education students reveals the same pattern, although with more moderate magnitudes. (See TOTAL spending per pupil – GE + PTSE in Table V A.) Interestingly, spending on part time special education students *per se* is highest in high achieving elementary schools and lowest in the low achieving elementary schools, although this pattern is not repeated at the middle school level. (See TOTAL spending per pupil – GE/GE + PTSE/PTSE in Tables V A and V B). In addition, for this group, expenditures on instructional support services increases with performance.

Finally, turning to the full-time special education students, the expenditure pattern reverses. (See TOTAL spending per pupil – SPECIAL ED in Table V A.) Total spending is highest in the high performing schools, lowest in the low performing schools and, interestingly, while the middle performing schools are, again, in the middle, spending is much closer to that in

the low performing schools. These patterns are repeated for subcategories of spending on teachers and paraprofessionals, instructional support, and leadership/supervision/support.

V. Conclusions

The findings detailed above are only the initial results of an extended study; much remains to be investigated before whatever causalities underlying these results can be established. But the initial findings are disheartening, both because they confirm years of previous research and because the findings are so consistent – poorly performing New York City schools overwhelmingly serve students of color who are poor, have consistently low attendance, and who are taught by teachers who have very limited experience, few if any credentials, and who make the lowest average salaries. Moreover, these poorly performing schools receive a higher per pupil expenditure than the aggregates for middle and high-performing schools.

The latest comprehensive effort to examine what structures these relationships, a series of articles examining the causes of *The Black-White Test Score Gap*, edited by Christopher Jencks and Meredith Phillips (Brookings Institution Press, Washington, D.C. 1998), suggests that the quality of students' family preparation for schooling, the quality of students' pre-school experience, and the quality of students' teachers explain much of the underlying causes of disparate performance. Large-scale research studies of the Tennessee Star Program suggest that reducing class size in the very early grades may well contribute to lowering the racial gap in test score performance. Other researchers across the past three decades have advanced other arguments about the causal mechanisms explaining the relationships this initial study documents.

The next steps in this study will explore some of the underlying mechanisms structuring the relationships we report above. We will also investigate the extent of variation in these

patterns, at district or school levels within New York City, that might begin to suggest how these relationships can be transformed. Clearly, efforts to break the correlations between race, poverty, poor teaching quality and student achievement are critical to the improvement of the New York City school systems and other urban systems across the country. Hopefully the continuation of this research can make a modest contribution to helping those efforts become successful.

TABLE II A
DESCRIPTIVE STATISTICS
ALL VARIABLES, ALL SCHOOLS
1997-98

| VARIABLE LABEL | VARIABLE NAME | N | Mean | Minimum | Maximum | StdDev |
|--------------------------------|---|-----|-------|---------|---------|--------|
| TESTING | | | | | | |
| R3AVGNCE | Read 3rd Grd: mean N. C. E. | 669 | 50.72 | 25.20 | 79.40 | 8.76 |
| R4AVGNCE | Read 4th Grd: mean N. C. E. | 665 | 52.65 | 33.50 | 81.40 | 8.93 |
| R5AVGNCE | Read 5th Grd: mean N. C. E. | 663 | 50.01 | 4.00 | 86.00 | 9.68 |
| R6AVGNCE | Read 6th Grd: mean N. C. E. | 463 | 46.99 | 18.20 | 89.30 | 11.10 |
| R7AVGNCE | Read 7th Grd: mean N. C. E. | 279 | 48.90 | 22.40 | 84.40 | 9.39 |
| R8AVGNCE | Read 8th Grd: mean N. C. E. | 267 | 50.98 | 24.00 | 83.20 | 9.09 |
| RTAVGNCE | Read All Grd: mean N. C. E. (weight NTST) | 905 | 50.35 | 25.20 | 79.57 | 9.03 |
| R3PTAKE | % Student Taken Test: R3 | 669 | 88.03 | 26.03 | 100.00 | 10.46 |
| R4PTAKE | % Student Taken Test: R4 | 665 | 91.33 | 60.81 | 100.00 | 7.14 |
| R5PTAKE | % Student Taken Test: R5 | 663 | 92.53 | 52.38 | 100.00 | 6.64 |
| R6PTAKE | % Student Taken Test: R6 | 464 | 91.93 | 0.00 | 100.00 | 9.36 |
| R7PTAKE | % Student Taken Test: R7 | 280 | 90.43 | 0.00 | 100.00 | 9.59 |
| R8PTAKE | % Student Taken Test: R8 | 267 | 90.01 | 1.39 | 100.00 | 9.99 |
| RTPTAKE | % Student Taken Test: RT | 905 | 90.52 | 1.50 | 100.00 | 8.07 |
| R3PPASS | Read 3rd Grd: % at/above grade(50th%tile) | 669 | 51.52 | 0.00 | 94.40 | 17.84 |
| R4PPASS | Read 4th Grd: % at/above grade(50th%tile) | 665 | 54.53 | 5.60 | 98.10 | 19.04 |
| R5PPASS | Read 5th Grd: % at/above grade(50th%tile) | 663 | 48.10 | 0.00 | 100.00 | 20.56 |
| R6PPASS | Read 6th Grd: % at/above grade(50th%tile) | 464 | 43.02 | 0.00 | 100.00 | 20.07 |
| R7PPASS | Read 7th Grd: % at/above grade(50th%tile) | 280 | 46.09 | 0.00 | 100.00 | 20.94 |
| R8PPASS | Read 8th Grd: % at/above grade(50th%tile) | 267 | 50.13 | 0.00 | 100.00 | 19.60 |
| RTPPASS | Read All Grd: % at/above grade(50th%tile) | 905 | 49.74 | 0.00 | 98.70 | 18.39 |
| M3AVGNCE | Math 3rd Grd: mean N. C. E. | 669 | 56.78 | 26.20 | 87.90 | 11.97 |
| M4AVGNCE | Math 4th Grd: mean N. C. E. | 665 | 59.20 | 28.00 | 92.40 | 12.42 |
| M5AVGNCE | Math 5th Grd: mean N. C. E. | 667 | 56.13 | 1.00 | 87.50 | 12.22 |
| M6AVGNCE | Math 6th Grd: mean N. C. E. | 465 | 56.23 | 31.40 | 90.30 | 11.43 |
| M7AVGNCE | Math 7th Grd: mean N. C. E. | 281 | 52.52 | 16.30 | 90.30 | 11.97 |
| M8AVGNCE | Math 8th Grd: mean N. C. E. | 267 | 53.52 | 31.20 | 88.90 | 10.77 |
| M1AVGNCE | Math All Grd: mean N. C. E. (weight NTST) | 905 | 56.45 | 28.67 | 87.30 | 11.51 |
| M3PTAKE | % Student Taken Test: M3 | 669 | 92.32 | 55.24 | 100.00 | 6.47 |
| M4PTAKE | % Student Taken Test: M4 | 665 | 94.09 | 62.89 | 100.00 | 5.35 |
| M5PTAKE | % Student Taken Test: M5 | 667 | 94.58 | 52.38 | 100.00 | 5.48 |
| M6PTAKE | % Student Taken Test: M6 | 466 | 94.44 | 0.00 | 100.00 | 6.97 |
| M7PTAKE | % Student Taken Test: M7 | 281 | 93.66 | 42.55 | 100.00 | 6.25 |
| M8PTAKE | % Student Taken Test: M8 | 267 | 93.04 | 46.15 | 100.00 | 6.46 |
| M1PTAKE | % Student Taken Test: M1 | 905 | 93.61 | 46.39 | 100.00 | 5.34 |
| M3PPASS | Math 3rd Grd: % at/above grade(50th%tile) | 669 | 62.06 | 0.00 | 100.00 | 20.47 |
| M4PPASS | Math 4th Grd: % at/above grade(50th%tile) | 665 | 63.99 | 10.00 | 100.00 | 19.93 |
| M5PPASS | Math 5th Grd: % at/above grade(50th%tile) | 667 | 62.29 | 0.00 | 100.00 | 21.06 |
| M6PPASS | Math 6th Grd: % at/above grade(50th%tile) | 466 | 62.63 | 0.00 | 100.00 | 20.40 |
| M7PPASS | Math 7th Grd: % at/above grade(50th%tile) | 281 | 54.98 | 0.00 | 100.00 | 21.58 |
| M8PPASS | Math 8th Grd: % at/above grade(50th%tile) | 267 | 57.90 | 6.30 | 100.00 | 20.32 |
| M1PPASS | Math All Grd: % at/above grade(50th%tile) | 905 | 61.53 | 12.70 | 100.00 | 19.36 |
| SPECIAL EDUCATION | | | | | | |
| PSEREG | Pct stu, special education | 904 | 6.33 | 0.00 | 37.70 | 6.29 |
| PRR | Pct stu, resource room | 883 | 6.27 | 0.10 | 21.10 | 2.95 |
| PSEREF | pct initial referrals to spec ed | 882 | 4.94 | 0.40 | 20.20 | 2.58 |
| SOCIOECONOMIC VARIABLES | | | | | | |
| PFULLYR | stu, pct in this school entire year | 888 | 92.18 | 49.60 | 99.80 | 4.16 |
| PATTEN | stu, pct average daily attendance 9798 | 905 | 90.50 | 77.80 | 98.50 | 2.98 |
| PWHITE | stu, pct white | 904 | 16.62 | 0.00 | 93.80 | 23.45 |
| PBLACK | stu, pct black | 904 | 35.94 | 0.00 | 97.60 | 30.06 |
| PHISP | stu, pct hispanic | 904 | 37.37 | 1.30 | 99.40 | 26.23 |
| PASIAN | stu, pct asian | 904 | 10.06 | 0.00 | 94.30 | 14.06 |
| PFEMALE | stu, pct female | 904 | 48.83 | 23.50 | 100.00 | 3.63 |
| PIMMIG | Pct stu, Arrival to US<3 yrs | 904 | 7.70 | 0.00 | 91.60 | 6.63 |
| PFL | Pct stu eligible for free lunch | 905 | 75.08 | 6.30 | 100.00 | 23.56 |
| PLEP | Pct stu, LEP | 864 | 15.93 | 0.30 | 115.30 | 13.10 |

TEACHERS

| | | | | | | |
|--------|--|-----|----------|----------|----------|---------|
| PTCHA | pct tch fully lic/perm assigned | 847 | 85.29 | 0.00 | 100.00 | 12.73 |
| PTCHF | pct tch more than 2 yrs in this school | 847 | 67.92 | 0.00 | 100.00 | 16.52 |
| PTCHC | pct tch more than 5 yrs teaching | 847 | 61.82 | 0.00 | 100.00 | 13.10 |
| PTCHD | pct tch masters or higher | 847 | 78.67 | 41.70 | 100.00 | 10.39 |
| PTCHE | pct tch avg num days absent | 799 | 7.91 | 3.00 | 14.50 | 1.45 |
| TFTSL | Full-timeTch PER TCH: Salary | 905 | 43256.71 | 28198.59 | 80274.41 | 4172.72 |
| TPRPSL | PrepPeriodTch PER TCH: Salary | 905 | 183.81 | -0.47 | 1653.33 | 315.15 |
| TOTHSL | Other Tch PER TCH: Salary | 905 | 1656.54 | 226.24 | 13731.82 | 1148.41 |

TABLE 11 A (CONTINUED)

| VARIABLE LABEL | VARIABLE NAME | N | Mean | Minimum | Maximum | StdDev |
|---|---|-----|----------|---------|----------|---------|
| RESOURCES | | | | | | |
| PUP_TCH | Pupil:Teacher Ratio (ALL_STD:TCHR_TOT) | 905 | 15.69 | 6.63 | 31.47 | 2.58 |
| TOTAL SPENDING PER PUPIL -- ALL | | | | | | |
| A_TOTAL | TOTAL (SUM of I, II, III - wo/passths) | 905 | 8358.73 | 4761.49 | 22414.42 | 1878.06 |
| A_I_DIR | I. DIRECT SERVICES (SUM A, B, C, D, E, & F) | 905 | 7490.01 | 3960.54 | 21509.95 | 1829.63 |
| A_IA | I. A. CLASSROOM INSTRUCTION | 905 | 4506.49 | 2876.85 | 11358.11 | 885.48 |
| A1100100 | I. A. Classroom Instr, Teachers | 905 | 3854.78 | 2397.70 | 8990.60 | 724.33 |
| A1100125 | I. A. Classroom Instr, Ed Paras | 905 | 254.39 | -0.06 | 1105.06 | 169.30 |
| A1100175 | I. A. Classroom Instr, Text Books | 905 | 76.72 | 2.75 | 602.64 | 43.00 |
| A1100200 | I. A. Classroom Instr, Librians/LibBooks | 905 | 9.45 | 0.00 | 228.41 | 16.78 |
| A1100250 | I. A. Classroom Instr, Prof Development | 905 | 121.11 | 27.44 | 1220.37 | 87.94 |
| A_IA_OTH | I. A. Classroom Instr, OTHER | 905 | 190.04 | 25.11 | 1881.54 | 132.91 |
| A_IB | I. B. INSTRUCTIONAL SUPPORT SERVICES | 905 | 824.45 | 59.41 | 4104.49 | 444.99 |
| A_IC | I. C. LEADERSHIP/SUPERVISION/SUPPORT | 905 | 633.44 | 183.98 | 3323.90 | 215.94 |
| A_ID | I. D. ANCILLARY SUPPORT SERVICES | 905 | 860.36 | 95.13 | 2972.62 | 344.75 |
| A_I_OTH | I. Direct Services, OTHER (E&F) | 905 | 665.27 | 35.42 | 5705.54 | 484.07 |
| A_II_DST | II. DISTRICT/SUPERINT COSTS (SUM A & B) | 905 | 176.89 | 53.68 | 1082.05 | 80.34 |
| TOTAL SPENDING PER PUPIL - GE ONLY | | | | | | |
| G_TOTAL | TOTAL (SUM of I, II, III - wo/passths) | 905 | 7017.42 | 4146.08 | 22266.33 | 1381.18 |
| G_I_DIR | I. DIRECT SERVICES (SUM A, B, C, D, E, & F) | 905 | 6210.01 | 3357.08 | 21365.03 | 1353.47 |
| G_IA | I. A. CLASSROOM INSTRUCTION | 905 | 4065.57 | 2436.97 | 10489.45 | 739.96 |
| G1100100 | I. A. Classroom Instr, Teachers | 905 | 3523.14 | 2025.14 | 8264.61 | 623.24 |
| G1100125 | I. A. Classroom Instr, Ed Paras | 905 | 163.75 | -0.06 | 717.70 | 128.49 |
| G1100175 | I. A. Classroom Instr, Text Books | 905 | 74.38 | 2.81 | 582.19 | 42.94 |
| G1100200 | I. A. Classroom Instr, Librians/LibBooks | 905 | 9.46 | 0.00 | 228.27 | 17.09 |
| G1100250 | I. A. Classroom Instr, Prof Development | 905 | 107.98 | 26.35 | 1216.35 | 84.88 |
| G_IA_OTH | I. A. Classroom Instr, OTHER | 905 | 186.86 | 23.73 | 1880.94 | 133.46 |
| G_IB | I. B. INSTRUCTIONAL SUPPORT SERVICES | 905 | 264.52 | 43.75 | 1483.69 | 144.87 |
| G_IC | I. C. LEADERSHIP/SUPERVISION/SUPPORT | 905 | 598.26 | 172.01 | 3323.89 | 208.16 |
| G_ID | I. D. ANCILLARY SUPPORT SERVICES | 905 | 615.50 | 95.04 | 1699.48 | 174.44 |
| G_I_OTH | I. Direct Services, OTHER (E&F) | 905 | 666.15 | 35.52 | 5706.47 | 485.56 |
| G_II_DST | II. DISTRICT/SUPERINT COSTS (SUM A & B) | 905 | 164.54 | 48.69 | 1051.38 | 80.09 |
| TOTAL SPENDING PER PUPIL - GE + PTSE | | | | | | |
| GP_TOT | TOTAL (SUM of I, II, III - wo/passths) | 905 | 7505.73 | 4473.19 | 22316.03 | 1500.96 |
| GP_IDIR | I. DIRECT SERVICES (SUM A, B, C, D, E, & F) | 905 | 6663.40 | 3651.62 | 21411.56 | 1463.95 |
| GP_IA | I. A. CLASSROOM INSTRUCTION | 905 | 4213.41 | 2545.45 | 10490.25 | 780.74 |
| GP_1100 | I. A. Classroom Instr, Teachers | 905 | 3664.48 | 2126.10 | 8264.61 | 668.98 |
| GP_1125 | I. A. Classroom Instr, Ed Paras | 905 | 164.15 | -0.06 | 717.91 | 128.54 |
| GP_1175 | I. A. Classroom Instr, Text Books | 905 | 75.47 | 2.81 | 586.03 | 42.96 |
| GP_1200 | I. A. Classroom Instr, Librians/LibBooks | 905 | 9.60 | 0.00 | 228.41 | 17.14 |
| GP_1250 | I. A. Classroom Instr, Professional Devl | 905 | 110.87 | 26.67 | 1216.35 | 85.39 |
| GPIA_OTH | I. A. Classroom Instr, OTHER | 905 | 188.83 | 23.79 | 1881.54 | 133.83 |
| GP_IB | I. B. INSTRUCTIONAL SUPPORT SERVICES | 905 | 562.87 | 59.41 | 4020.96 | 261.21 |
| GP_IC | I. C. LEADERSHIP/SUPERVISION/SUPPORT | 905 | 604.09 | 176.76 | 3323.90 | 209.89 |
| GP_ID | I. D. ANCILLARY SUPPORT SERVICES | 905 | 616.84 | 95.11 | 1699.67 | 174.43 |
| GPI_OTH | I. Direct Services, OTHER (E&F) | 905 | 666.17 | 35.52 | 5706.51 | 485.56 |
| GP_IIDST | II. DISTRICT/SUPERINT COSTS (SUM A & B) | 905 | 173.26 | 53.68 | 1088.06 | 82.14 |
| TOTAL SPENDING PER PUPIL - GE/GE + PTSE/PTSE | | | | | | |
| H_TOTAL | TOTAL (SUM of I, II, III - wo/passths) | 899 | 14634.70 | 6668.17 | 44437.64 | 3636.64 |
| H_I_DIR | I. DIRECT SERVICES (SUM A, B, C, D, E, & F) | 899 | 13294.24 | 5878.17 | 43036.02 | 3595.35 |
| H_IA | I. A. CLASSROOM INSTRUCTION | 899 | 6266.81 | 3068.11 | 16346.63 | 1571.83 |

| | | | | | | |
|---|---|-----|----------|---------|-----------|---------|
| H1100100 | I. A. Classroom Instr, Teachers | 899 | 5628.83 | 2431.22 | 14575.00 | 1498.93 |
| H1100125 | I. A. Classroom Instr, Ed Paras | 899 | 168.96 | -0.06 | 889.97 | 133.43 |
| H1100175 | I. A. Classroom Instr, Text Books | 899 | 90.92 | 2.82 | 612.04 | 46.69 |
| H1100200 | I. A. Classroom Instr, Librians/LibBooks | 899 | 11.31 | 0.00 | 229.84 | 18.53 |
| H1100250 | I. A. Classroom Instr, Prof Development | 899 | 151.27 | 51.67 | 922.96 | 93.73 |
| H_IA_OTH | I. A. Classroom Instr, OTHER | 899 | 215.52 | 24.95 | 1887.49 | 146.56 |
| H_IB | I. B. INSTRUCTIONAL SUPPORT SERVICES | 899 | 5036.63 | 306.29 | 33628.01 | 2754.41 |
| H_IC | I. C. LEADERSHIP/SUPERVISION/SUPPORT | 899 | 689.06 | 232.47 | 7688.57 | 368.00 |
| H_ID | I. D. ANCILLARY SUPPORT SERVICES | 899 | 636.21 | 115.68 | 1720.12 | 173.99 |
| H_I_OTH | I. Direct Services, OTHER (E&F) | 899 | 665.54 | 35.82 | 5706.77 | 485.98 |
| H_II_DST | II. DISTRICT/SUPERINT COSTS (SUM A & B) | 899 | 294.13 | 77.30 | 1999.70 | 193.77 |
| TOTAL SPENDING PER PUPIL - SPECIAL EDUCATION | | | | | | |
| F_TOTAL | TOTAL (SUM of I, II, III - wo/passths) | 729 | 21811.56 | 0.00 | 123194.57 | 8069.79 |
| F_I_DIR | I. DIRECT SERVICES (SUM A, B, C, D, E, & F) | 729 | 20556.44 | 0.00 | 122059.70 | 7985.90 |
| F_IA | I. A. CLASSROOM INSTRUCTION | 729 | 9414.37 | 0.00 | 65642.46 | 4676.53 |
| F1100100 | I. A. Classroom Instr, Teachers | 729 | 7126.93 | 0.00 | 64784.27 | 3884.56 |
| F1100125 | I. A. Classroom Instr, Ed Paras | 729 | 1691.95 | 0.00 | 15704.16 | 1386.83 |
| F1100175 | I. A. Classroom Instr, Text Books | 729 | 93.46 | 0.00 | 1281.56 | 70.06 |
| F1100200 | I. A. Classroom Instr, Librians/LibBooks | 729 | 6.85 | 0.00 | 135.08 | 13.75 |
| F1100250 | I. A. Classroom Instr, Prof Development | 729 | 285.53 | 0.00 | 5971.63 | 309.08 |
| F_IA_OTH | I. A. Classroom Instr, OTHER | 729 | 209.65 | 0.00 | 2173.14 | 149.27 |
| F_IB | I. B. INSTRUCTIONAL SUPPORT SERVICES | 729 | 4819.63 | 0.00 | 17371.38 | 2201.15 |
| F_IC | I. C. LEADERSHIP/SUPERVISION/SUPPORT | 729 | 1005.43 | 0.00 | 7144.01 | 648.99 |
| F_ID | I. D. ANCILLARY SUPPORT SERVICES | 729 | 4688.42 | 0.00 | 41149.01 | 2922.31 |
| F_I_OTH | I. Direct Services, OTHER (E&F) | 729 | 628.59 | 0.00 | 5701.70 | 417.25 |
| F_II_DST | II. DISTRICT/SUPERINT COSTS (SUM A & B) | 729 | 235.19 | 0.00 | 1331.08 | 168.96 |

TABLE II A (CONTINUED)

| VARIABLE LABEL | VARIABLE NAME | N | Mean | Minimum | Maximum | StdDev |
|-----------------------|--------------------------------------|-----|--------|---------|---------|--------|
| STUDENT COUNTS | | | | | | |
| ALL_STD | All Students (GE + FTSE) | 905 | 870.46 | 66.00 | 2671.00 | 365.89 |
| GE_STD | General Education Students | 905 | 819.38 | 53.00 | 2671.00 | 358.20 |
| PTSE_STD | Part-time Special Education Students | 905 | 51.21 | 0.00 | 180.00 | 29.49 |
| FTSE_STD | Full-time Special Education Students | 905 | 51.08 | 0.00 | 234.00 | 47.63 |
| TOTREG | nbrReg | 904 | 803.28 | 42.00 | 2672.00 | 403.06 |
| NGEREG | stu, num gen ed | 904 | 755.24 | 42.00 | 2672.00 | 391.69 |
| NRR | stu, num resource rm | 883 | 47.58 | 1.00 | 170.00 | 27.72 |
| NSEREG | stu, num spec ed | 904 | 48.04 | 0.00 | 234.00 | 47.77 |

**TABLE II B
VARIABLE NAMES, DESCRIPTIONS, & SOURCES
1997-98**

| Variable Name | Description | Source |
|----------------------|--|---------------|
| R#AVGNCE | Reading "#" represents grade 3 rd -8 th and "T"=all grades Mean N.C.E. score | CTB98 |
| M#AVGNCE | Mathematics "#" represents grade 3 rd -8 th and "T"=all grades Mean N.C.E. score | CAT98 |
| R#PPASS | Reading "#" represents grade 3 rd -8 th and "T"=all grades Percent of students taking the exam who scored at or above the 50 th percentile (number at or above 50 th percentile divided by number of students taking the test) | CTB98 |
| M#PPASS | Mathematics "#" represents grade 3 rd -8 th and "T"=all grades Percent of students taking the exam who scored at or above the 50 th percentile (number at or above 50 th percentile divided by number of students taking the test) | CAT98 |
| R#PTAKE | Reading "#" represents grade 3 rd -8 th and "T"=all grades Percent of students for whom a test form was prepared that took the exam. Students not taking the test may have been absent, excused or exempted. | CTB98 |
| M#PTAKE | Mathematics "#" represents grade 3 rd -8 th and "T"=all grades Percent of students for whom a test form was prepared that took the exam. Students not taking the test may have been absent, excused or exempted. | CAT98 |
| PSEREG | Percent of total registered (TOTREG) students who are in special education | ASR98 |
| PRR | Percent of all students (TOTREG) who are receiving resource room/consultant teacher/ related services | ASR98 |
| PFULLYR | Percent of all students (TOTREG) in this school from October through June | ASR98 |
| PATTEN | Percent of days student attended | ASR98 |
| PWHITE | Percent of all students (TOTREG) who are white | ASR98 |
| PBLACK | Percent of all students (TOTREG) who are black | ASR98 |
| PHISP | Percent of all students (TOTREG) who are hispanic | ASR98 |
| PASIAN | Percent of all students (TOTREG) who are asian or other | ASR98 |
| PFEMALE | Percent of all students (TOTREG) who are female | ASR98 |
| PIMMIG | Percent of all students (TOTREG) who have arrived in the U.S. in the last three years as of October 31st. | ASR98 |
| PFL | Percent of students eligible for free or reduced price lunch NOTE: Community school districts 1, 5, 9, and 17 are universal free lunch districts, all schools in the csd are automatically eligible for Title I status. Schools are not required to collect lunch forms. These data, in most cases, have not been updated from previous years counts. | ASR98 |
| PLEP | Percent of all students (TOTREG) who are limited English proficient, scoring below the 41 st percentile on the Language Assessment Battery (LAB) test | ASR98 |
| PSEREF | Percent of students initially referred for assessment of special educational need.referred to special education during the school year | ASR98 |
| PTCHA | Percent of teachers who are fully licensed and permanently assigned to this | ASR98 |

| Variable Name | Description | Source |
|---------------|--|--------|
| | school (9798 Human Resource division provided school level data to DAA) | |

TABLE II B (CONTINUED)

| Variable Name | Description | Source |
|---------------|---|------------------------------|
| PTCHF | Percent of teachers who have been in this school for more than 2 years (9798 Human Resource division provided school level data to DAA) | ASR98 |
| PTCHC | Percent of teachers who have more than 5 years of teaching experience (anywhere) (9798 Human Resource division provided school level data to DAA) | ASR98 |
| PTCHD | Percent of teachers with masters degree or higher (9798 Human Resource division provided school level data to DAA) | ASR98 |
| PTCHE | Teachers' average number of days absent (9798 Human Resource division provided school level data to DAA) | ASR98 |
| TFTSL | Average Teacher Salary Salary expenditures per full-time equivalent teacher position without distinction in terms of student types | SBER98 special request |
| TPRPSL | Average Prep-period salary per teacher Salary expenditures that remunerate teachers for the use of preparation periods divided by the number of full-time equivalent teacher positions. | SBER98 special request |
| TOTHSL | Average Other salary per teacher Expenditures for per diem or per session substitute teachers divided by the number of full-time equivalent teacher positions | SBER98 special request |
| PUP_TCH | Pupil:Teacher All students divided by the number of full-time equivalent teacher positions | SBER98 |
| *_TOTAL | TOTAL Spending per pupil | SBER98 |
| *_I_DIR | I. Direct Services to Schools "Services provided directly to public school students and staff, and which take place primarily in the school building during the school day, during the school year." (SBER) | SBER98 |
| *_IA | A. Classroom Instruction "School-based direct instructional services provided primarily in classrooms." (SBER) Sum of the following; teachers, paraprofessionals, other classroom staff, textbooks, librarians/library books, instructional supplies and equipment, professional development, curriculum development, contracted instructional services, and summer and evening school. | SBER98 |
| *1100100 | i. Teachers "All teachers who provide direct instruction on a full-time, part-time or per diem basis or during their preparation periods. General education, special education, and bilingual teachers are included. Also included are library teachers in elementary and middle schools whose salaries appear on teacher lines,..." (SBER) | SBER98 |
| *1100125 | ii. Ed Paraprofessionals "Full-time, part-time, per-diem and substitute educational paraprofessionals who provide direct services in the classroom. Paraprofessionals who provide mandated services per a child's Individualized Education Plan (IEP) are included in Related Services." (SBER) | SBER98 |
| *1100175 | iii. Textbooks "Funds spent for textbooks for school-day, school-year classroom instructional use including New York State Textbook Law funds as well as other city and state operating funds. Textbook funds spent in after-school | SBER98 |

| Variable Name | Description | Source |
|---------------|---|--------|
| | budgets are included in After-School Programs; textbook funds for summer school are included in Summer School, etc. Thus, funds reported in this category do not represent the entire budget for textbooks." (SBER) | |

TABLE II B (CONTINUED)

| Variable Name | Description | Source |
|---------------|---|--------|
| *1100200 | Librarians/Library Books "Funds spent for library books for school libraries for school-day, school-year use including all New York State Textbook Law funds and other city and state operating funds." (SBER) | SBER98 |
| *1100250 | Professional Development "Funds spent for professional development provided at the school level, primarily teacher trainers and trainees. Included in this category are funds spent for professional educational conferences." (SBER) | SBER98 |
| *_IA_OTH | Other Sum of the following categories under classroom instruction; other classroom staff, instructional supplies and equipment, curriculum development, contracted instructional services, and summer and evening school. | SBER98 |
| *_IB | Instructional Support Services "Included in this category are direct services to students that supplement the basic category below are staff who directly supervise the services and programs, and other than personal services (supplies, materials etc.) that are used by the service providers. Both BOE providers and contracted staff are included." (SBER) Sum of the following categories; counseling services, attendance/outreach services, related services, drug prevention, referral, evaluation and placement, after school and student activities, and parent involvement activities. | SBER98 |
| *_IC | C. Leadership/Supervision/Support Sum of the following categories; principals, assistant principals, supervisors, secretaries, school aides and other support staff, and supplies materials, equipment and telephones. | SBER98 |
| *_ID | Ancillary Support Services Sum of the following categories; food services, transportation, school safety, and computer system support. | SBER98 |
| *_I_OTH | Other Includes building services expenditures on custodial services, building maintenance, leases, and energy. | SBER98 |
| *_II_DST | District Costs "Funds supporting the operation of the 32 Community School District offices and boards,..." (SBER) | SBER98 |
| * = A | All expenditures (by function) divided by all students. All students are the sum of general education students plus full-time special education students | |
| * = G | Expenditures made on the behalf of general education students divided by general education students. | |
| * = GP | Expenditures made on the behalf of general education students plus expenditures made on the behalf of part-time special education students divided by general education students. | |
| * = H | The sum of the following; a) expenditures made on the behalf of general education student divided by general education students, and b) | |

| Variable Name | Description | Source |
|---------------|--|--------|
| | expenditures made on the behalf of part-time special education students divided by part-time special education students | |
| * = F | Expenditures made on the behalf of full-time special education students divided by full-time special education students. | |
| | | |

TABLE II B (CONTINUED)

| Variable Name | Description | Source |
|---------------|---|--------|
| ALL_STD | All Students, sum of general education and full-time special education students | SBER98 |
| GE_STD | General Education Students | SBER98 |
| PTSE_STD | Part-time Special Education, general education students who have been identified as in need of resource room services | SBER98 |
| FTSE_STD | Full-time Special Education | SBER98 |
| TOTREG | student register as of October 31, 1997 sum of general education register and special education register | ASR98 |
| NGEREG | number of students on register who are in general education | ASR98 |
| NRR | number of students in need of resource room services, these students may be general education or special education students | ASR98 |
| NSEREG | number of students on register who are in special education | ASR98 |

ASR98

Annual School Reports 1997-98

Produced by the New York City Board of Education's Division of Assessment and Accountability

CTB98, CAT98

CTB 1997-98, CAT 1997-98 School-level results by grade

Produced by the New York City Board of Education's Division of Assessment and Accountability

SBER98

School Based Expenditure Reports, Fiscal Year 1997-98

Produced by the New York City Board of Education's Division of Budget Operations and Review

All information on teacher and related salaries was provided by the BOE's Division of Budget Operations and Review per a special request.

TABLE III A
CONSISTENCY ACROSS TESTS AND GRADES

3rd Grade Reading and Math
 $r = .899$

| Math | Reading | | |
|--------|---------|--------|------|
| | Low | Middle | High |
| Low | 77 | 43 | |
| Middle | 37 | 370 | 20 |
| High | | 35 | 87 |

3rd and 5th Grade Reading
 $r = .847$

| 5 th Grade | 3 rd Grade | | |
|--------------------------|-----------------------|--------|------|
| | Low | Middle | High |
| Low | 63 | 38 | |
| Middle | 44 | 355 | 21 |
| High | | 31 | 84 |

**TABLE III B
NUMBER OF TABLES**

| | | |
|------------------------------------|----------|-------|
| Grades 3-8 | 6 | |
| Elementary and middle Schools | <u>2</u> | |
| | 8 | |
| Reading and math | x 2 =16 | |
| Pupil weighted and not weighted | x 2 =32 | Total |

TABLE V A
1997-98 All Grades Reading
Elementary Schools
by Level of Performance

| | Low <-1 SD N.C.E. | Middle Between ±1 SD N.C.E. | High >+1 SD N.C.E. |
|---|--------------------------------|--|---------------------------------|
| TESTING | | | |
| Mean N.C.E. score | 39.13 | 50.02 | 64.83 |
| Percent of tested students | | | |
| tested scoring at or above 50 th percentile* | 26.33 | 49.56 | 78.31 |
| taking the test* | 88.62 | 90.14 | 93.99 |
| SPECIAL EDUCATION | | | |
| Percent of students | | | |
| in special education* | 9.50 | 5.50 | 4.26 |
| receiving resource room services* | 5.49 | 5.85 | 6.26 |
| initially referred to special education* | 6.56 | 5.63 | 4.77 |
| ATTENDANCE | | | |
| Pct of students in this school for entire year* | 88.83 | 91.69 | 95.25 |
| Average daily attendance* | 88.35 | 90.97 | 93.57 |
| SOCIOECONOMIC VARIABLES | | | |
| Percent of students who are | | | |
| white* | 0.89 | 11.51 | 50.76 |
| black* | 47.48 | 38.61 | 13.37 |
| Hispanic* | 49.59 | 39.92 | 17.22 |
| Asian* | 2.04 | 9.95 | 18.66 |
| female* | 48.12 | 49.06 | 48.48 |
| recent immigrants (within the past 3 years)* | 5.00 | 8.30 | 8.35 |
| eligible for free lunch* | 93.6 | 81.84 | 39.61 |
| with limited English proficiency* | 20.7 | 16.85 | 10.99 |
| TEACHERS | | | |
| Percent of teachers | | | |
| licensed and permanently assigned to the school* | 74.62 | 87.56 | 95.82 |
| who have been in this school for 2+ years* | 58.13 | 69.95 | 73.71 |
| with 5+ years teaching experience* | 55.17 | 61.9 | 66.24 |
| with M.A. or higher* | 70.43 | 79.03 | 86.04 |
| Average number of days absent* | 8.52 | 7.80 | 7.29 |
| Average Teacher Salary | 39,779.29 | 43,029.24 | 46,302.90 |
| Average Prep-period salary per teacher | 112.78 | 53.25 | 42.29 |
| Average Other salary per teacher | 1,359.40 | 1,587.94 | 2,360.62 |

TABLE V A (continued)
1997-98 All Grades Reading
Elementary Schools
by Level of Performance

| RESOURCES | | | |
|--|----------|----------|----------|
| Pupil:Teacher | 14.22 | 16.05 | 17.47 |
| TOTAL Spending per pupil - ALL (all dollars per student [all]) | 9,135.58 | 8,124.06 | 7,916.39 |
| I. Direct Services to Schools | 8,234.99 | 7,271.72 | 7,073.09 |
| A. Classroom Instruction | 4,811.01 | 4,402.20 | 4,160.96 |
| i. Teachers | 3,913.63 | 3,705.71 | 3,705.00 |
| ii. Ed Paraprofessionals | 377.04 | 304.51 | 180.05 |
| iii. Textbooks | 98.08 | 73.83 | 65.22 |
| iv. Librarians/Library Books | 15.52 | 8.27 | 5.45 |
| v. Professional Development | 141.92 | 119.72 | 96.78 |
| vi. Other | 264.83 | 190.15 | 108.46 |
| B. Instructional Support Services | 961.11 | 777.09 | 813.05 |
| C. Leadership/Supervision/Support | 697.37 | 603.93 | 565.19 |
| D. Ancillary Support Services | 1,065.61 | 895.8 | 851.80 |
| E. Other | 699.88 | 592.70 | 682.09 |
| II. District Costs | 192.49 | 165.24 | 161.39 |
| TOTAL Spending per pupil - GE ONLY (general education dollars per general education student) | 7,421.28 | 6,846.81 | 6,578.73 |
| I. Direct Services to Schools | 6,594.42 | 6,047.97 | 5,793.27 |
| A. Classroom Instruction | 4,271.65 | 4,002.44 | 3,745.53 |
| i. Teachers | 3,533.94 | 3,407.73 | 3,390.16 |
| ii. Ed Paraprofessionals | 243.06 | 218.50 | 94.11 |
| iii. Textbooks | 95.33 | 71.50 | 63.47 |
| iv. Librarians/Library Books | 15.81 | 8.28 | 5.51 |
| v. Professional Development | 123.22 | 108.86 | 86.53 |
| vi. Other | 260.29 | 187.57 | 105.75 |
| B. Instructional Support Services | 321.25 | 245.50 | 206.44 |
| C. Leadership/Supervision/Support | 658.18 | 574.12 | 532.42 |
| D. Ancillary Support Services | 642.81 | 632.31 | 628.50 |
| E. Other | 700.53 | 593.59 | 680.38 |
| II. District Costs | 182.11 | 155.79 | 145.44 |

TABLE V A (continued)
1997-98 All Grades Reading
Elementary Schools
by Level of Performance

| | | | |
|--|-----------|-----------|-----------|
| TOTAL Spending per pupil - GE + PTSE (general education and part-time special education dollars per general education student) | 7,877.19 | 7,303.68 | 7,142.64 |
| I. Direct Services to Schools | 7,017.05 | 6,473.69 | 6,318.83 |
| A. Classroom Instruction | 4,411.51 | 4,134.04 | 3,899.53 |
| i. Teachers | 3,666.69 | 3,533.46 | 3,538.79 |
| ii. Ed Paraprofessionals | 243.26 | 218.93 | 94.60 |
| iii. Textbooks | 96.53 | 72.50 | 64.26 |
| iv. Librarians/Library Books | 16.02 | 8.40 | 5.57 |
| v. Professional Development | 126.50 | 111.53 | 89.19 |
| vi. Other | 262.51 | 189.21 | 107.12 |
| B. Instructional Support Services | 598.37 | 534.32 | 569.28 |
| C. Leadership/Supervision/Support | 662.59 | 578.17 | 539.79 |
| D. Ancillary Support Services | 644.03 | 633.56 | 629.83 |
| E. Other | 700.55 | 593.61 | 680.40 |
| II. District Costs | 189.16 | 162.53 | 157.14 |
| TOTAL Spending per pupil - GE/GE + PTSE/PTSE (general education per general education student + additional amount, part-time special education dollars per part-time special education student) | 14,859.02 | 14,529.63 | 15,380.29 |
| I. Direct Services to Schools | 13,484.82 | 13,208.87 | 14,005.61 |
| A. Classroom Instruction | 6,444.33 | 6,127.68 | 6,127.53 |
| i. Teachers | 5,611.98 | 5,436.76 | 5,686.68 |
| ii. Ed Paraprofessionals | 242.25 | 224.55 | 103.60 |
| iii. Textbooks | 111.35 | 87.76 | 76.51 |
| iv. Librarians/Library Books | 18.29 | 9.96 | 6.47 |
| v. Professional Development | 166.53 | 154.68 | 127.26 |
| vi. Other | 293.93 | 213.97 | 127.01 |
| B. Instructional Support Services | 4,962.53 | 5,193.30 | 5,907.28 |
| C. Leadership/Supervision/Support | 714.51 | 640.25 | 640.97 |
| D. Ancillary Support Services | 667.08 | 653.33 | 649.15 |
| E. Other | 696.37 | 594.31 | 680.68 |
| II. District Costs | 301.89 | 267.04 | 323.76 |

TABLE V A (continued)
1997-98 All Grades Reading
Elementary Schools
by Level of Performance

| | | | |
|---|-----------|-----------|-----------|
| TOTAL Spending per pupil - SPECIAL ED (full-time special education dollars per full-time special education student) | 21,277.75 | 22,528.89 | 26,095.29 |
| I. Direct Services to Schools | 19,991.90 | 21,303.65 | 24,778.37 |
| A. Classroom Instruction | 8,794.28 | 9,364.42 | 10,826.50 |
| i. Teachers | 6,431.00 | 6,932.36 | 8,240.75 |
| ii. Ed Paraprofessionals | 1,613.30 | 1,860.31 | 2,009.33 |
| iii. Textbooks | 122.50 | 91.75 | 86.33 |
| iv. Librarians/Library Books | 11.96 | 5.66 | 2.17 |
| v. Professional Development | 316.97 | 265.46 | 350.16 |
| vi. Other | 298.53 | 208.87 | 137.76 |
| B. Instructional Support Services | 4,528.47 | 5,022.67 | 6,315.53 |
| C. Leadership/Supervision/Support | 919.19 | 956.57 | 1,069.48 |
| D. Ancillary Support Services | 5,044.30 | 5,405.75 | 5,925.28 |
| E. Other | 705.68 | 554.24 | 641.57 |
| II. District Costs | 234.66 | 212.90 | 278.15 |
| STUDENT COUNTS | | | |
| Means | | | |
| All Students (SBER) | 770.47 | 880.93 | 723.66 |
| General Education Students (SBER) | 705.51 | 837.68 | 693.02 |
| Part-time Special Education (SBER) | 39.08 | 47.26 | 43.13 |
| Full-time Special Education (SBER) | 64.96 | 43.25 | 30.63 |
| Sums | | | |
| All Students (SBER) | 81,670 | 391,135 | 90,457 |
| General Education Students (SBER) | 74,784 | 371,931 | 86,628 |
| Part-time Special Education (SBER) | 4,142 | 20,983 | 5,391 |
| Full-time Special Education (SBER) | 6,886 | 19,204 | 3,829 |
| NUMBER OF SCHOOLS | 106 | 444 | 125 |

* The source for these variables is the Annual School Reports which contain student enrollment counts that differ slightly from the School Based Expenditure Reports (SBER).

TABLE V B
1997-98 All Grades Reading
Middle Schools
by Level of Performance

| | Low <-1 SD N.C.E | Middle Between ±1 SD N.C.E. | High >+1 SD N.C.E. |
|---|-------------------------------|--|---------------------------------|
| TESTING | | | |
| Mean N.C.E. score | 36.16 | 47.78 | 64.64 |
| Percent of tested students | | | |
| tested scoring at or above 50 th percentile* | 21.54 | 44.22 | 78.14 |
| taking the test* | 88.62 | 89.58 | 95.24 |
| SPECIAL EDUCATION | | | |
| Percent of students | | | |
| in special education* | 12.29 | 7.23 | 3.89 |
| receiving resource room services* | 6.93 | 7.99 | 5.88 |
| initially referred to special education* | 3.57 | 2.73 | 2.06 |
| ATTENDANCE | | | |
| Pct of students in this school for entire year* | 90.00 | 92.86 | 96.86 |
| Average daily attendance* | 84.34 | 89.02 | 93.57 |
| SOCIOECONOMIC VARIABLES | | | |
| Percent of students who are | | | |
| white* | 2.76 | 13.34 | 38.34 |
| black* | 50.78 | 37.69 | 23.10 |
| Hispanic* | 44.42 | 39.71 | 20.80 |
| Asian* | 2.05 | 9.25 | 17.76 |
| female* | 46.90 | 48.76 | 51.95 |
| recent immigrants (within the past 3 years)* | 6.65 | 8.23 | 4.42 |
| eligible for free lunch* | 87.78 | 76.41 | 38.02 |
| with limited English proficiency* | 17.85 | 15.5 | 5.63 |
| TEACHERS | | | |
| Percent of teachers | | | |
| licensed and permanently assigned to the school* | 71.96 | 79.60 | 89.87 |
| who have been in this school for 2+ years* | 59.25 | 66.27 | 67.24 |
| with 5+ years teaching experience* | 59.93 | 62.04 | 68.00 |
| with M.A. or higher* | 72.28 | 78.02 | 83.51 |
| Average number of days absent* | 8.69 | 8.18 | 7.66 |
| Average Teacher Salary | 42,345.16 | 43,431.55 | 46,155.73 |
| Average Prep-period salary per teacher | 748.77 | 566.31 | 211.26 |
| Average Other salary per teacher | 1,178.32 | 1,399.04 | 2,658.47 |

TABLE V B (continued)
1997-98 All Grades Reading
Middle Schools
by Level of Performance

RESOURCES

| | | | |
|--|-----------|----------|----------|
| Pupil:Teacher | 12.68 | 14.69 | 16.96 |
| TOTAL Spending per pupil - ALL (all dollars per student [all]) | 10,304.90 | 8,531.62 | 7,622.26 |
| I. Direct Services to Schools | 9,371.87 | 7,635.88 | 6,743.55 |
| A. Classroom Instruction | 5,495.48 | 4,684.37 | 4,244.49 |
| i. Teachers | 4,694.19 | 4,150.83 | 3,845.77 |
| ii. Ed Paraprofessionals | 195.95 | 141.05 | 80.98 |
| iii. Textbooks | 111.46 | 73.78 | 64.91 |
| iv. Librarians/Library Books | 15.01 | 10.78 | 8.06 |
| v. Professional Development | 152.73 | 125.43 | 107.92 |
| vi. Other | 326.14 | 182.49 | 136.85 |
| B. Instructional Support Services | 1,051.32 | 847.53 | 693.45 |
| C. Leadership/Supervision/Support | 846.99 | 676.97 | 627.94 |
| D. Ancillary Support Services | 799.13 | 686.29 | 665.94 |
| E. Other | 1,178.95 | 740.73 | 511.74 |
| II. District Costs | 222.69 | 196.15 | 196.73 |
| TOTAL Spending per pupil - GE ONLY (general education dollars per general education student) | 8,826.37 | 7,232.04 | 6,560.26 |
| I. Direct Services to Schools | 7,972.33 | 6,411.63 | 5,733.11 |
| A. Classroom Instruction | 4,942.39 | 4,191.62 | 3,848.38 |
| i. Teachers | 4,275.99 | 3,762.66 | 3,524.02 |
| ii. Ed Paraprofessionals | 97.72 | 58.26 | 20.55 |
| iii. Textbooks | 107.86 | 71.21 | 63.87 |
| iv. Librarians/Library Books | 14.69 | 10.63 | 8.35 |
| v. Professional Development | 124.06 | 110.5 | 97.73 |
| vi. Other | 322.06 | 178.37 | 133.85 |
| B. Instructional Support Services | 434.38 | 292.87 | 225.93 |
| C. Leadership/Supervision/Support | 781.57 | 631.81 | 607.31 |
| D. Ancillary Support Services | 634.27 | 551.64 | 538.32 |
| E. Other | 1,179.71 | 743.69 | 513.17 |
| II. District Costs | 208.82 | 176.82 | 187.84 |

TABLE V B (continued)
1997-98 All Grades Reading
Middle Schools
by Level of Performance

| | | | |
|--|-----------|-----------|-----------|
| TOTAL Spending per pupil - GE + PTSE (general education and part-time special education dollars per general education student) | 9,281.81 | 7,786.33 | 7,009.36 |
| I. Direct Services to Schools | 8,392.34 | 6,921.75 | 6,149.30 |
| A. Classroom Instruction | 5,089.13 | 4,386.88 | 3,989.85 |
| i. Teachers | 4,415.21 | 3,949.35 | 3,659.36 |
| ii. Ed Paraprofessionals | 97.80 | 58.69 | 21.05 |
| iii. Textbooks | 109.34 | 72.69 | 64.54 |
| iv. Librarians/Library Books | 14.88 | 10.84 | 8.41 |
| v. Professional Development | 126.92 | 113.92 | 100.80 |
| vi. Other | 324.98 | 181.38 | 135.68 |
| B. Instructional Support Services | 696.07 | 596.41 | 493.78 |
| C. Leadership/Supervision/Support | 791.66 | 641.41 | 612.79 |
| D. Ancillary Support Services | 635.74 | 553.33 | 539.69 |
| E. Other | 1,179.73 | 743.71 | 513.19 |
| II. District Costs | 218.07 | 190.08 | 195.07 |
| TOTAL Spending per pupil - GE/GE + PTSE/PTSE (general education per general education student + additional amount, part-time special education dollars per part-time special education student) | 15,419.02 | 13,984.20 | 14,714.88 |
| I. Direct Services to Schools | 14,078.81 | 12,631.70 | 13,406.19 |
| A. Classroom Instruction | 6,992.71 | 6,541.43 | 5,927.72 |
| i. Teachers | 6,219.63 | 6,014.87 | 5,497.34 |
| ii. Ed Paraprofessionals | 98.90 | 62.72 | 25.37 |
| iii. Textbooks | 127.23 | 89.26 | 88.84 |
| iv. Librarians/Library Books | 16.97 | 13.31 | 9.41 |
| v. Professional Development | 159.25 | 150.53 | 142.08 |
| vi. Other | 370.73 | 210.74 | 164.68 |
| B. Instructional Support Services | 4,389.78 | 4,007.72 | 5,568.03 |
| C. Leadership/Supervision/Support | 861.95 | 766.61 | 877.90 |
| D. Ancillary Support Services | 654.38 | 572.11 | 543.29 |
| E. Other | 1,180.00 | 743.83 | 489.25 |
| II. District Costs | 337.63 | 331.78 | 288.60 |

TABLE V B (continued)
1997-98 All Grades Reading
Middle Schools
by Level of Performance

| | | | |
|---|-----------|------------|-----------|
| TOTAL Spending per pupil - SPECIAL ED (full-time special education dollars per full-time special education student) | 17,296.92 | 18,688.14 | 23,494.55 |
| I. Direct Services to Schools | 16,024.62 | 17,416.32 | 22,261.43 |
| A. Classroom Instruction | 8,224.63 | 9,051.20 | 11,243.26 |
| i. Teachers | 6,653.64 | 7,192.67 | 8,835.67 |
| ii. Ed Paraprofessionals | 882.28 | 1,299.88 | 1,915.23 |
| iii. Textbooks | 104.06 | 84.51 | 69.20 |
| iv. Librarians/Library Books | 8.37 | 8.83 | 5.79 |
| v. Professional Development | 313.44 | 272.23 | 270.60 |
| vi. Other | 262.84 | 193.08 | 146.76 |
| B. Instructional Support Services | 3,564.78 | 3,986.07 | 4,684.16 |
| C. Leadership/Supervision/Support | 1,253.01 | 1,112.63 | 877.50 |
| D. Ancillary Support Services | 1,969.86 | 2,583.02 | 4,950.98 |
| E. Other | 1,012.33 | 683.40 | 505.54 |
| II. District Costs | 263.45 | 264.96 | 202.46 |
| STUDENT COUNTS | | | |
| Means | | | |
| All Students (SBER) | 779.05 | 1,007.89 | 1,050.00 |
| General Education Students (SBER) | 689.84 | 937.62 | 997.09 |
| Part-time Special Education (SBER) | 48.58 | 73.67 | 68.70 |
| Full-time Special Education (SBER) | 89.21 | 70.27 | 52.91 |
| Sums | | | |
| All Students (SBER) | 29,604.00 | 160,254.00 | 34,650.00 |
| General Education Students (SBER) | 26,214.00 | 149,081.00 | 32,904.00 |
| Part-time Special Education (SBER) | 1,846.00 | 11,713.00 | 2,267.00 |
| Full-time Special Education (SBER) | 3,390.00 | 11,173.00 | 1,746.00 |
| NUMBER OF SCHOOLS | 38 | 159 | 33 |

* The source for these variables is the Annual School Reports which contain student enrollment counts that differ slightly from the School Based Expenditure Reports (SBER).