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ABSTRACT

This paper explores accountability issues at the district level by focusing on school-district features that might influence school achievement. It examines the effect of input variables on student performance, over a period of four years, and takes these into account when considering school performance. For its theoretical framework, the study used a conceptualization of equity and accountability that accommodates input and outcome variables. Data from 133 schools in one Kentucky school district were analyzed to answer such questions as "How can schools be held accountable wile taking into consideration differences in input student variables." The primary data sources were the 1995-96 to 1998-99 schools' profile documents. The findings indicate that input variables provide a good understanding of a school's pattern of achievement. When comparing schools, school districts, regions, and states, the first task is to equalize the units of analysis on fundamental input variables such as free/reduced lunch status, single-parent homes, mobility rates, and ECE status. By considering these types of variables in a weighted-input index, it is possible to predict outcomes in significant cognitive and noncognitive student variables. This means that schools can compare their predicted unstandardized outcomes against their actual outcomes. (Contains 30 references.) (RJM)

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School District Equity and Accountability: Toward a Comprehensive Model

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School District Equity and Accountability: Toward a Comprehensive Model

Abstract

A conceptualization of equity and accountability that articulates input and outcome variables provided the theoretical framework for this study. The purpose of this analysis was to explore accountability issues at the district level when the role of input variables on student performance across four years were taken into consideration with school performance. Multiple regression analyses were used to identify the over-achiever, average, and under-achiever schools at elementary, middle, and high school level (N = 133). Overall findings indicated that incorporating input variables provided a better understanding of schools' pattern of achievement and it is an issue that needs to be addressed by policy makers and administrators at the school district level.

KEYWORDS: ACCOUNTABILITY, EQUITY, K-12

School District Equity and Accountability: Toward a Comprehensive Model

The move toward greater accountability in education has been one of the hallmarks since the 1970s in public education (Rich, 1985). Since 1974, Levin has argued that performance accountability is concerned with educational outputs. Levin (1974) defined performance accountability as "a periodic report of the attainments of schools and other educational units" (p. 364). Performance reporting includes such measurement techniques as statewide assessments, school report cards, and performance indicators. The overall objective of a performance accountability system is to provide a standard upon which a school can compare its own progress over time. The end results should (a) stimulate actions to improve education, (b) monitor regulatory compliance for state requirements, and (c) produce rewards as well as sanctions to schools (Kirst, 1990).

Accountability is generally conceived as a demand to judge schools by their outputs. Schools are expected to make wise use of public resources not only by efficient cost accounting procedures but also by raising test scores. Accountability systems have been designed to track the progress of educational reforms. The function of an accountability system in education is to monitor and evaluate the performance of the education system as a whole and the individual school's achievement (Wohlstetter, 1991).

Accountability is one of the most important approaches to help the right use of collective funds in public education. Through increased surveillance, it is essential to insist that the scarce tax dollars are held accountable for the products they produce through some valid form of student growth measurement (testing). According to Pinkney (1980), through an effective monitoring system, the general public should insist that all classroom teachers are capable of helping children regardless of their cultural background.

Since the 1980s, education has been "rediscovered" and carefully examined. According to Nelson, Palonsky, and Carlson (1990), the schools needed again a reform. Previous generations of education reformers were concerned with making education available to the children of all classes and races. Instead of availability, the 1980s generation was now forced to consider the quality of school experiences. As Adler (1982) argues, the legal mandate for education cannot be satisfy only by guaranteeing all children access to education. To satisfy the educational responsibilities of a democratic society, public education must demonstrate that each student is provided with adequate levels of knowledge and skills. According to Nelson, Palonsky, and Carlson (1990), educational outcomes cannot longer be measured only in quantity (e.g., years of schooling and the number of high school diplomas granted). Schools must guarantee that education has a demonstrably positive effect on students.

> Schools must show that students benefit from their years of attendance, that increased investment in schooling can be measured in greater ability to read, write, and do mathematics, and that moving up the academic ladder from grade to grade is based on merit rather than on social promotion. (Nelson, Palonsky, & Carlson, 1990, p. 286)

The members of the accountability movement believed that answers to qualitative questions must be based on hard data. Schools needed quantifiable measures of student performance and teacher effectiveness if accountability was to be implemented. Intelligent policy decisions should be based on objective information, and although no single means of data collection is sufficient, the data generated by well-designed standardized tests are crucial to an understanding of school outcomes. Testing became the scientific basis for making decisions about the quality of schools to produce academic learning by students. Testing became the yardstick against which society charted the progress and shortcomings of education, and became

the form in which schools reported the status of public education to public officials and parents. Impressionistic data was not sufficient and anecdotal data was not scientific. Standardized achievement tests became the objective measures of performance. The accountability era had entered into public education and was here to stay until today.

Spady (1988) argues that accountability and outcome-based education is a culminating demonstration of learning. In that sense, outcome-based education focuses on identifying and defining specified educational results and teaching toward them (Ellis & Fouts, 1994). Clarity of focus means that all curriculum design, instructional delivery, and assessment is geared to what the students should learn at the end of their time in schools. The expectation is that all students should be able to learn significant curriculum in schools; this means expanding the ways and number of times students get a chance to learn. Clarity of focus, expanded opportunity, high expectations, and design curriculum backward became the four defining principles of an outcome-based education (Brandt, 1993).

The popularity of performance-based accountability systems have grown since A Nation at Risk was published (National Commission on Excellence in Education, 1983), with many states using standardized test scores as the indicator of school quality, building incentive regimes involving payment for results, and threatening state takeovers of poorly performing schools. The problem that arises is that such approaches have consistently simplified student learning and ignored the learning conditions and social context (Darling-Hammond, 1993; Ginsberg & Berry, 1998).

Darling-Hammond (1988) studied the implications of testing policy for quality and equality. According to this author, in the long-run, assessment cannot be a constructive means of reform unless state invest in more educationally useful and valid measures of student learning. In

addition, testing policies affect student opportunity to learn. In other words, testing policies have implications for equity: "in addition to determining whether or not students graduate, tests are increasingly used to track students and to determine whether they can be promoted from one grade to the next" (p. 222). However, focusing solely on such outcome data ignores the varied conditions under which students learn within and outside of school.

Equality in Public Education

From a historical perspective, James Coleman and his colleagues were the first, after the post-Brown era, to analyze the issue of "equal educational opportunity" (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966). The goals of the project were to determine whether equal educational opportunities were offered in schools, and the relationship between student achievement and the kind of school the students attended. The Coleman Report examined the extent to which there was equality of investments in the education of different groups of students and the extent to which there was equality of academic results among groups as measured by performance on standardized achievement tests.

The findings released in Equality of Educational Opportunity were also very significant to the American educational system as was in the case of Brown vs. Board of Education. Coleman et al. (1966) concluded that, regarding achievement patterns, the lower achieving groups had higher percentages of students from homes in which the parents had little formal education and low occupational levels. The Coleman Report showed that a very significant factor related to student achievement was the family background of the students in terms of social class and race. In this sense, there is a need to improve schools where disadvantaged minority students attend and increase the family and community resources available to these students, beginning in early childhood.

Murphy and Hallinger (1989) studied the issue of equity as access to learning, specifically on curricular and instructional treatment differences. Basically, the study conveyed a picture of students who may attend the same school but who come away with very different educational experiences. Elements identified as responsible for differences on outcomes include the attention the students receive from school counselors, the type of subjects they study, the textbooks they read, the expectations their teachers have on them, the amount of homework they do, and the amount of time they spend in class. These authors recommend refocusing the educational reform efforts in general, and the educational equality issues in specific, toward what is going to be taught, to whom, and by whom. Essentially, the conceptualization of equity as access to knowledge is a powerful strategy to improve education to all students, especially for those students with whom the educational system have been the least successful in the past. As an important outcome of this theoretical approach, Murphy (1988) developed the third-generation conceptualization of equity: equity as student opportunity to learn; the first-generation focused on equity as access and the second-generation focused on equity as process.

Equity and Accountability in Kentucky

In the new accountability era, the Kentucky Educational Reform Act (KERA) established the right of each and every child to an adequate education based on the equitable distribution of resources (Rose v. Council for Better Education, 1989). In 1990, the Kentucky General Assembly called for a new educational system and a new testing system to check every year students learning in schools. The Kentucky Board of Education and the Kentucky Department of Education developed the system with the support of employers, educators, legislators, and parents and with the advice of national educational experts.

The current main parts of the educational and testing system, called The Commonwealth Accountability Testing System (CATS), include the Kentucky's core content, the Kentucky core content tests, and accountability. The first element, the Kentucky core content is a document that describes what students should know and be able to do in each grade. It sets high standards for students and helps the teachers plan instruction.

The Kentucky core content tests measure how well students have mastered the core content; it measures how well the schools, teachers, and students are meeting the high standards set by the state with the input of multiple stakeholders. Students also take a national basic skills test (Comprehensive Test of Basic Skills); this national basic skills test allows to compare the achievement of Kentucky students with the achievement of students throughout the nation. The set of tests are given every year in every school to measure their academic progress of their students. The tests use multiple-choice, essay-like questions, and writing samples to measure how well students know a subject and what they can do with what they know.

Finally, the accountability piece, is the way of using all the test scores and some other non-cognitive measures to tell schools, parents, and taxpayers how well each school is performing. The non-cognitive measures include dropout rates, attendance figures, retention rates, and successful transition to adult life. The cognitive and non-cognitive dimensions make up the formula for school improvement. This helps schools to keep on continuously improving. Schools that perform well on the tests often receives reward; on the other hand, schools that do not achieve so well, normally receive additional support such as highly skilled educators and scholastic audits to identify needs to help them perform better. The lowest performing schools are identified by falling below an "assistance line" on their growth chart.

In summary, Kentucky's public school system holds schools accountable for continued progress. Under CATS, each school will have a customized growth chart to show the level of student achievement that is expected each year until the year 2014. Schools are expected to have a score of 100 on a scale that goes from zero to 140 by the year 2014.

Drawing on the work of theorists and advocates for equity based reform and accountability (e.g., Darling-Hammond & Ascher, 1992; Oakes, 1989; Shepard, 1991; Wheelock, 1995), this study underscores the complexity of reforming districts with high poverty and suggests that the performance accountability model is incapable of capturing the full picture. The challenge facing district policy makers who are demanding high levels of accountability is to determine which accountability mechanism is best, in what contexts, and for what purposes (Whohlstetter, 1991). This study examined an approach to accountability that incorporated input variables. Emerging from this analysis is a set of design characteristics for accountability mechanisms at the district level that form an incipient theory about school district governance in education.

The purpose of this paper was to examine features of the school district that might have an impact on school achievement from an accountability perspective. The paper will address research questions that arise from the review of literature and the particular context at the district level. In the present study, data from all schools in a public school system of a county located in Kentucky were analyzed to answer the following research questions concerned with school accountability and student achievement: How can schools be held accountable while taking in consideration widely differences in input student variables? Is there a way of identifying under-achiever, average, and over-achiever based on a comparison between predicted and actual outcomes?

Method

PARTICIPANTS

The analyses were conducted on 133 schools (88 elementary school, 24 middle schools, and 21 high schools) of the school district under examination. The primary data sources for this investigation were the 1995-1996 to 1998-99 schools' profile documents. The school district has developed in the last decade a strong management information system that collects socio-demographic, academic, and non-academic information. The weighted percents of both the input index and the outcome index was defined by policy makers based on their experience in the District and the particular needs of the school system under examination.

INDEPENDENT VARIABLE

The independent variable, the "weighted input index," was calculated using the following variables and their associated weights: percentage of students receiving free and reduced price lunch (.50), mobility rate (.15), Exceptional Child Education (.05), and mixed-parent households (.30). This variable represents the "need" of the student population for each school. Definitions of the variables that comprise the "weighted input index" are provided below:

Percentage of students qualifying for free and reduced lunch is the number of students who qualified for either free or reduced lunches according to federal guidelines. Mobility is a comparison of re-entries to total enrollment expressed as an annual percentage. Exceptional Child Education (ECE) is the percentage of students who have a physical, behavioral or cognitive disability that adversely affects their educational performance. Mixed-parent household is the percentage of students whose households are not comprised of both their biological mother and father.

DEPENDENT VARIABLE

The fundamental dependent variable, the "weighted outcome index", was calculated using the following variables and their associated weights: Kentucky Instructional Results Instructional System (KIRIS)/Commonwealth Accountability Testing System (CATS) test (.50), percentage of students who are not academically at-risk (.20), writing portfolio scores (.15), attendance percentage (.10), and Comprehensive Test of Basic Skills (CTBS) (.05). Definitions of the variables that comprise the "weighted outcome index" are provided below:

The KIRIS is the statewide testing/assessment program composed of several content area tests, involving both open response and multiple choice items, given to different grade levels. The same students are not tested on the same content areas in consecutive years. Performance on each of the subtests is categorized into 4 levels of increasing mastery: novice, apprentice, proficient, and distinguished. The total academic index is derived from the percentages of students who were in each of the categories of novice, apprentice, proficient, and distinguished.

The new Commonwealth Accountability Testing System (CATS) includes several modifications in response to years of debate. For instance, CATS is now spread out over all grades (4-12) with different subjects in each grade in response to the criticism of the considerable testing burden suffered by grades 4, 8, and 11 in the previous assessment system (KIRIS). In addition, the Kentucky Department of Education (KED) has cautioned about the inappropriateness of establishing comparisons in scores for determining reward or assistance to schools. In addition, the CATS used in 1998-99 school year has a slightly different weighting system for determining the total academic index that allows for differentiating within the novice and apprentice categories (low, medium and high). Despite the differences in content and scoring between KIRIS and CATS, a Pearson product-moment correlation showed that both tests are

very highly correlated ($r = .96$, $p < .01$).

Percentage of students who are not academically at-risk was calculated by dividing the number of students who score above the first three stanines on standardized tests in Reading and Mathematics into the number of students enrolled at that particular school. Writing Portfolio index is the composite of percentage of students scoring Novice, Apprentice, Proficient and Distinguished on their writing portfolios. The portfolios include the following types of writing: personal, literary, transactive, and reflective. Attendance is the average daily attendance as a percent of average daily membership. CTBS is a nationally standardized achievement test administered to all students in grades 3, 6, and 9. Scores are reported in mean Normal Curve Equivalents (NCE) for the total battery, which includes Reading, Mathematics, and Language.

DESIGN AND PROCEDURES

This study was a typical case of secondary analysis. The research design was quantitative in nature, specifically correlational (Gall, Borg, and Gall, 1996). Simple regression is the recommended procedure when the researcher is interested in predicting a dependent variable from a single predictor (Stevens, 1996). The least squares criterion was used for these analyses (i.e. the sum of the squared estimated errors of prediction is minimized). The assumptions for using multiple regression were met and the Cook distance did not show outliers (Stevens, 1996).

RESULTS

DESCRIPTIVE STATISTICS OF VARIABLES

The first step was to perform basic descriptive analyses of the weighted dependent and independent variables; in addition, descriptive statistics were computed for the variables that comprise the two weighted indexes that were used in the simple regression analysis (See Tables 1 through 4). The weighted input index has remained relatively stable across the four-year period for elementary, middle and high schools. The elementary schools have the highest weighted input index and the high schools have the lowest weighted input index for all the school years under examination. The input index is conceptualized as a "need" index for a school, thus the result is primarily attributed to the larger percent of students receiving free and reduced price lunch at the elementary school level.

Tables 1 through 4 show the results of the measures of central tendency and dispersion for each of the four years by school level. The weighted outcome index is highest for the high school level ($\underline{M}$ = 52.6 in 1997/1998; $\underline{M}$ = 65.9 in 1998/1999; and, $\underline{M}$ = 67.6 in 1999/2000) across all years, except for the first year where elementary school level had the highest weighted outcome index ($\underline{M}$ = 52.6 in 1996/1997). The weighted outcome index was lowest for the middle school level ($\underline{M}$ = 47.7 in 1996/1997; $\underline{M}$ = 47.3 in 1997/1998; $\underline{M}$ = 54.9 in 1998/1999; and, $\underline{M}$ = 56.0 in 1999/2000) for all years.

The finding that high school's outcome index is the highest is not surprising since the high school level also has the lowest weighted input index (M = 32.6 in 1996/1997; M = 33.8 in 1997/1998; M = 34.7 in 1998/1999; M = 33.3 in 1999/2000). The opposite occurs with the elementary school level. The elementary schools have a higher weighted outcome index with a higher weighted input or need index (M = 46.6 in 1996/1997; M = 46.8 in 1997/1998; M = 47.1 in 1998/1999; M = 45.3 in 1999/2000). The middle schools fall in the middle across all years in the weighted input index (M = 40.3 in 1996/1997; M = 41.5 in 1997/1998; M = 41.8 in 1998/1999; M = 39.7 in 1999/2000).

INSERT TABLE 1 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

INSERT TABLE 3 ABOUT HERE

INSERT TABLE 4 ABOUT HERE

REGRESSION ANALYSIS

As presented in Tables 5 through 8, the weighted input index contributed significantly to the prediction of the outcome index at the elementary, middle and high school levels in each of the years under examination (alpha level of .01). The weighted input index predicted 66-75% of the variance for elementary schools, 78-86% of the variance for middle schools, and 75-79% of the variance for high schools. Thus, input variables alone account for a significant proportion of the variance when predicting school's outcomes. Higher weighted input or need indexes negatively contribute to school's outcome indexes.

INSERT TABLE 5 ABOUT HERE

INSERT TABLE 6 ABOUT HERE

INSERT TABLE 7 ABOUT HERE

INSERT TABLE 8 ABOUT HERE

Discussion

This study has proved extremely helpful for educational administrators and policy makers in the district under examination. By acknowledging the input index, it is possible to predict a "fair" outcome index because it considers the particular characteristics of the school under analysis. However, the difference in the weighted outcome index must not be associated exclusively with input variables, but also include important factors internal to the school level. Process variables such as teacher experience and credentials might come to play as factors explaining this phenomenon.

The multiple R showed a consistent and impressive negative correlation across all years. The high power was observed by the levels of explained variance in the R-squared. In that regard, a comparison can be made between the actual outcome index and a predicted outcome index. Furthermore, by examining the standardized residuals of the regression analysis, determinations can be made about schools that are under- or over-performing based on the needs of their student population. In this particular district, the determination was made using one standardized absolute value residual.

If a comparison is made among schools, school districts, regions, and states, the first task is to equalize the units of analysis on fundamental input variables such as free/reduced lunch status, single parent homes, mobility rates, and ECE status. By incorporating these types of variables into a weighted input index, it is possible to predict outcomes in significant cognitive and non-cognitive student variables. The utility of this kind of regression model is that, schools are able to compare their predicted unstandardized outcomes against their actual outcomes, while considering their particular characteristics in terms of student population needs and barriers to learning.

From a purely theoretical perspective, Murphy (1988) analysis on the relationship between equity and excellence is relevant in this study. It is this conceptualization that integrates the principles of equity and excellence an important issue for the educational reform efforts in an accountability era. The third-generation conceptualization of equity basically comprehends equity as student opportunity to learn; the first-generation only focused on equity as access (i.e. input) and the second-generation focused on equity as school activities and processes. In this regard, this conceptualization goes beyond the traditional input and process focus of prior educational reform efforts and establishes an interesting link with the school efforts toward quality expressed in terms of student achievement. Significant policy changes have to be framed by the conceptualization of equity as excellence in the accountability educational reform era. In this regard, this conceptualization of equity is highly inter-related to accountability understood as performance. Under the conceptualization of accountability as performance, output educational indicators are used to track and evaluate school achievement (Levin, 1974; Wohlstetter, 1991).

From a practical perspective, this study supports Murphy and Hallinger (1989) analysis that educational administrators and policy-makers have to refocus the educational reform efforts in general, and the educational equality issues in specific, toward what is going to be taught, to whom, and by whom. Some of the elements identified as responsible for differences on student outcomes on prior research include the attention that students receive from school counselors, the expectations their teachers have on them, the amount of homework they do, and the amount of time they spend in class (Murphy & Hallinger, 1989). Instructional time is becoming more and more a central concern. In lower ability schools, more instructional time is lost due to interruptions and simply managing behavior.

Statewide performance standards served to unify reforms carried out at the local levels. This balance between centralized and decentralized responsibilities has provided a constructive dynamic between two crucial accountability levels of the system. "Unity and diversity appears to be a reasonably synthesis for advancing the excellence agenda while maintaining the values of public accountability and local responsibility" (Fantini, 1986, p. 160). However, the centralization-decentralization principle can only be achieved if both entities, state and school districts, consider the particular contexts of schooling using input measures. A performance outcome is just one side of the coin: the other side is the type of clientele that the school district serves. Only then, we can start to speak about a comprehensive accountability model.

This study was strictly exploratory and it does not intend to have generalizability. The analysis was restricted to the public elementary, middle, and high schools of a very particular county in the state of Kentucky. This kind of analysis requires careful examination before taking any kind of administrative decisions. In addition, the weighted procedure introduced some level of subjectivity that will require policy makers to make the best decision based on their particular context. The same applies to the decision on the standardized residual that can be used for defining over- and under-performing schools. Further research needs to explore other variables that might compose an "input index," similar to the one developed by this school district. Furthermore, other variables that integrate an "outcome index," also needs to be developed according to the particular characteristics of the multiple school districts across the nation. Key decision criteria such as weights and residuals also need to be defined based on the particular context of schooling in the widely varied regions of the United States.

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Table 1

Descriptive Statistics for the 1996/1997 School Year (N = 133)

Variable	Elementary		Middle		High	
	M	SD	M	SD	M	SD
Free/Reduced Price Lunch	59.6	22.2	48.4	19.2	35.1	17.0
Mobility Rate	13.3	6.3	13.6	6.7	10.1	6.7
ECE	7.2	2.8	11.4	4.4	8.2	3.9
Mixed-parent Households	48.0	13.3	45.0	12.3	43.6	13.0
Weighted Input Index	46.6	15.5	40.3	14.2	32.6	13.1
Writing Portfolio Scores	31.6	12.1	18.7	10.8	32.5	14.1
CTBS Scores	45.9	8.7	45.5	8.8	47.0	11.7
KIRIS Scores	37.3	8.8	30.0	9.8	37.9	15.0
Not Academically At-Risk	87.0	7.0	92.2	3.8	83.5	9.9
Attendance	94.5	1.3	91.8	2.7	88.2	4.9
Weighted Outcome Index	52.6	7.5	47.7	7.6	51.7	12.3

Table 2

Descriptive Statistics for the 1997/1998 School Year (N = 133)

Variable	Elementary		Middle		High	
	M	SD	M	SD	M	SD
Free/Reduced Price Lunch	59.7	21.5	47.9	18.5	35.4	16.4
Mobility Rate	11.4	5.3	13.6	6.8	10.6	6.5
ECE	5.9	2.2	12.7	4.3	9.0	4.8
Mixed-parent Households	49.6	12.5	49.6	12.8	46.7	12.7
Weighted Input Index	46.8	14.8	41.5	14.1	33.8	12.8
Writing Portfolio Scores	33.2	11.0	20.8	10.1	39.6	13.2
CTBS Scores	45.5	8.9	46.1	8.7	47.7	11.5
KIRIS Scores	36.8	9.1	28.3	9.8	40.1	14.3
Not Academically At-Risk	87.5	6.8	92.5	4.0	87.7	7.5
Attendance	94.9	1.1	92.3	2.5	89.8	4.0
Weighted Outcome Index	52.6	7.5	47.3	7.7	54.9	11.1

Table 3

Descriptive Statistics for the 1998/1999 School Year (N = 133)

Variable	Elementary		Middle		High	
	M	SD	M	SD	M	SD
Free/Reduced Price Lunch	60.1	21.5	48.5	18.1	37.3	17.1
Mobility Rate	11.4	4.9	11.9	6.2	10.8	8.1
ECE	6.3	2.5	12.8	4.7	9.8	5.6
Mixed-parent Households	50.3	12.4	50.2	11.5	46.7	12.5
Weighted Input Index	47.1	14.7	41.8	13.3	34.7	13.3
Writing Portfolio Scores	51.6	12.5	32.5	11.3	57.9	12.8
CTBS Scores	47.2	8.7	46.0	8.6	45.9	11.6
CAT Scores	55.1	9.7	43.7	10.0	56.2	14.3
Not Academically At-Risk	83.5	12.4	83.1	10.7	89.1	7.0
Attendance	94.7	1.0	92.5	2.3	89.4	4.3
Weighted Outcome Index	63.8	8.6	54.9	8.9	65.9	11.0

Table 4

Descriptive Statistics for the 1999/2000 School Year (N = 133)

Variable	Elementary		Middle		High	
	M	SD	M	SD	M	SD
Free/Reduced Price Lunch	57.0	21.2	45.5	17.3	34.4	16.0
Mobility Rate	10.7	4.7	11.8	6.4	10.0	7.5
ECE	6.6	2.5	12.3	4.3	10.6	5.8
Mixed-parent Households	49.4	12.9	48.6	11.2	46.9	13.0
Weighted Input Index	45.3	14.7	39.7	12.9	33.3	13.0
Writing Portfolio Scores	54.9	15.0	32.4	11.5	58.9	12.6
CTBS Scores	48.0	8.4	46.1	9.0	47.0	11.1
CAT Scores	56.7	10.0	44.5	9.5	57.1	14.2
Not Academically At-Risk	82.8	7.6	86.2	6.2	93.8	3.0
Attendance	94.8	1.0	93.0	2.3	90.4	4.0
Weighted Outcome Index	65.0	8.4	56.0	8.1	67.6	10.0

Table 5

Simple Regression of the Weighted Outcome Index on Weighted Input Index in the 1996/1997 School Year

Variables	Elementary Standardized Coefficient	t	Middle Standardized Coefficient	t	High Standardized Coefficient	t
Weighted Input Index	-.81	-12.81*	-.91	-10.00*	-.87	-7.63*

* $p < .01$

$R^2 = .66$ for elementary school level, ($F = 164.01$, $p < .01$)

$R^2 = .82$ for middle school level, ($F = 99.92$, $p < .01$)

$R^2 = .75$ for high school level, ($F = 58.26$, $p < .01$)

Table 6

Simple Regression of the Weighted Outcome Index on Weighted Input Index in the 1997/1998 School Year

Variables	Elementary Standardized Coefficient	t	Middle Standardized Coefficient	t	High Standardized Coefficient	t
Weighted Input Index	-.87	-15.97*	-.89	-9.21*	-.88	-8.01*

* $p < .01$

$R^2 = .75$ for elementary school level, ($F = 255.06$, $p < .01$)

$R^2 = .79$ for middle school level, ($F = 84.89$, $p < .01$)

$R^2 = .77$ for high school level, ($F = 64.23$, $p < .01$)

Table 7

Simple Regression of the Weighted Outcome Index on Weighted Input Index in the 1998/1999 School Year

Variables	Elementary Standardized Coefficient	t	Middle Standardized Coefficient	t	High Standardized Coefficient	t
Weighted Input Index	-.84	-14.25*	-.93	-11.73*	-.88	-7.90*

* $p < .01$

$R^2 = .70$ for elementary school level, ($F = 203.16$, $p < .01$)

$R^2 = .86$ for middle school level, ($F = 137.49$, $p < .01$)

$R^2 = .77$ for high school level, ($F = 62.42$, $p < .01$)

Table 8

Simple Regression of the Weighted Outcome Index on Weighted Input Index in the 1999/2000 School Year

Variables	Elementary Standardized Coefficient	t	Middle Standardized Coefficient	t	High Standardized Coefficient	t
Weighted Input Index	-.81	-12.75*	-.88	-8.81*	-.89	-8.37*

* $p < .01$

$R^2 = .66$ for elementary school level, ($F = 162.65$, $p < .01$)

$R^2 = .78$ for middle school level, ($F = 77.65$, $p < .01$)

$R^2 = .79$ for high school level, ($F = 70.00$, $p < .01$)

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