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2015

Abstract

Examination of Resource Allocation and Student Achievement

by

Jo Ann Neal

MS, Walden University, 2006

BA, New Jersey City University, 2000

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

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## Abstract

Despite the raise in per-pupil expenditures, the achievement gap between economically advantaged and disadvantaged students continues to increase. Education proponents are scrambling to understand the complexities of local school funding. The No Child Left behind deadline stipulated that all students must be proficient in language arts and mathematics by 2014. The constructivist theory served as the conceptual framework for the study. Performance data were obtained from the State of New Jersey Department of Education and the United States Department of Education. This quantitative study determined whether a significant relationship exists between the allocation of fiscal resources and students' test scores. Improvement District Survey data were obtained from the New Jersey school district. District test results for Grades 6, 7, and 8 in language arts and mathematics from the 2011-2012 school year were used. Multiple linear regression analysis revealed no significant relationship between the allocation of fiscal resources and student achievement other than a significant relationship (25%) between mathematics achievement and educational media services/school library. The Improvement District Survey results revealed that the New Jersey district is capable of aligning their improvement efforts with the barriers and challenges of teachers. These findings have implications for positive social change for education officials by informing their allocation of fiscal resources. This informed approach will support increased student achievement and will add to the current research of allocation patterns and student performance.



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## Dedication

This dissertation is dedicated to my children Jessica and Willie III, who listened to endless hours of educational discourse, and supported me with a smile through it all. I would never have dared think that I could accomplish this moment without their belief in me. Also, I would like to thank my parents, John and Shirley Neal, for encouraging me not only to begin the process, but to keep going. Furthermore, thank you Johnette, Carol, Patricia, and Stephanie for allowing me to disappear to pursue my dreams. I could not have done this without having great sisters like you. Finally, a special thanks to Gary Van Miert for his love, understanding, and support.

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## Section 1: Introduction to the Study

### **Background**

Many school leaders and teachers are frustrated with the growing accountability requirements to ensure that all students, including those who come from low socioeconomic backgrounds and/or from minority backgrounds demonstrate proficiency on standardized tests (Reeves, 2003). These requirements are a result of the No Child Left Behind (NCLB) Act signed into law by President Bush in 2001. This legislation provided funding for programs intended to improve the academic performance of United States schools. NCLB contains four basic education reform principles: (a) stronger accountability for results, (b) increased flexibility and local control for local challenges, (c) expanded options for parents, and (d) proven teaching methods (New Jersey Department of Education, 2012).

To ensure compliance with the provisions of NCLB (2001), each state was required to create assessments aligned to the state's Core Content Curriculum Standards in language arts and mathematics for Grades Kindergarten through 12. Benchmarks must be set for proficiency in each content subject area. Student scores are grouped into three categories: partially proficient, proficient, and advanced proficient. The goal for all students was to be proficient in language arts literacy and mathematics by the year 2014 (Hanushek & Lindseth, 2009). Additionally, under NCLB, every school is evaluated annually to determine if adequate yearly progress (AYP) is being made toward meeting the state benchmarks (New Jersey Department of Education, 2012).

The largest federal funding program in education history is NCLB. Since the revision in the Title I funding formula (a federal program that provides funding to local school districts to improve academic achievement of disadvantaged students), NCLB is expected to improve target resources to school districts with greater numbers of poor children (NCLB, 2002). Most importantly, Title I is a major component of NCLB. The majority of funds are committed to Title I which requires considerable accountability for superior student learning as reflected on statewide assessments. Furthermore, the law included requirements intended to provide states and districts greater flexibility in how the federal portions of allotments are spent (Braden & Schroeder, 2004; NCLB, 2002;). More detailed information about Title I is provided in Section 3.

Most Americans believe that increasing school funding will lead to improved student achievement (Hanushek & Lindseth, 2009). Similar studies have been conducted in several states in search for answers to the perplexity surrounding the debate of financing education. Turley (2009) studied school finance in Texas and used the Texas Assessment of Skills and Knowledge and Skills (TAKS) and mean SAT scores for students in each public school district. Results of the study concluded that per-pupil expenditures did not influence the results of the standardized testing for the 2006-2007 school year. Later, Arrington (2010) studied the correlation between instructional expenditures and student performance. This study looked at the results of the Illinois Standards Proficiency Achievement Test and the Prairie Achievement Examination, achievement tests designed to assess skills for college. Also, she used district-level aggregate data for 868 districts within the state of Illinois. Arrington concluded that

instructional expenditures per pupil had a positive and statistically significant impact on students' performance. However, the non instructional expenditures per pupil did not have a strong impact on student performance.

In this quantitative study, I focused on the comparison of resource allocation and standardized test scores in language arts and mathematics. One New Jersey district was chosen for the study. Data were gathered from the New Jersey Assessment of Skills and Knowledge results for Grades 6, 7, and 8 from the 2011-2012 school year. An Improvement District Survey was administered to gain the perspective of teachers about resource allocation and student achievement.

### **Problem Statement**

Despite the raise in per-pupil expenditures (2010), the achievement gap between the economically advantaged and disadvantaged (lack the skills necessary to thrive in the 21st century) students continues to increase. In 2011, 76% of economically advantaged third through eighth grade students scored proficient on the New Jersey Assessment of Skills and Knowledge (NJASK) and 45% of economically disadvantaged third through eighth scored proficient (New Jersey Department of Education, 2012). Lawmakers, researchers, and education officials are scrambling to understand the complexities of local school funding (Education Week, 2007). Some have argued for continuing the traditional approach to school funding reform and feel more money needs to be spent to reduce disparities between the rich and poor school districts where spending levels in the two types of districts are equivalent (New Jersey Department of Education, 2012). Some have proposed increasing the level of spending in poor districts above the wealthy ones to

compensate inequalities (Wenglinsky, 1997). Other policymakers suggest using the productivity approach (Wenglinsky, 1997). Wenglinsky elucidated, "Little agreement exists on which expenditures and resources are most likely to improve student performance or whether resources matter at all" (p. vii). Debates on the issue of funding education have offered no immediate resolution. However, a well-informed argument is a healthy way to proceed in the direction of change (Wenglinsky, 1997).

The task to meet the NCLB deadline was overwhelming. All students were expected to be proficient in language arts and mathematics by the year 2014. Allocating resources effectively becomes vital because it helps broaden our understanding of the impact that school resources may have on student outcomes (Hanushek & Lindseth, 2009).

### **Nature of the Study**

In this quantitative study, I investigated if a relationship exists between resource allocation and student achievement scores on the NJASK. It is essential that district, school administrators, and policy makers are provided current information for improving the allocation of fiscal resources to support increased student achievement. In this study, I used district test results of the NJASK in language arts and mathematics. Students enrolled in Grades 6, 7, and 8 during the 2011-2012 school year were selected. There were 5,387 students combined. Expenditure, demographic, and student data were obtained from the State of New Jersey Department of Education and the United States Department of Education. Improvement District Survey data were obtained from the New Jersey school district.

To ensure anonymity, I do not reveal the name of the district or identifiable student information, and student/parent consent forms were not required. The scores were analyzed using a correlation regression design because the goal was to investigate the strength of the relationship between funding and student achievement. Since the study did not find a significant relationship between funding and achievement, then one might expect difficulties in requesting any additional funding for education. A detailed discussion of the methodology used in this study will be presented in Section 3.

### **Research Question and Hypotheses**

The research question was developed to determine whether a significant relationship exists between the allocation of fiscal resources and student achievement as measured by test scores. The question relates to sixth, seventh, and eighth grade students in the content areas of language arts and mathematics.

The following question was addressed and hypotheses tested:

1. Is there a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores?

$H_0$  1: There is no significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

$H_a$  1: There is a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

### **Purpose of the Study**

This research is significant because students have wide differences in their abilities and desires. Educators must be aware of the differences and prepare to change

the odds for all students, especially the disadvantaged. Being aware of the day-to-day responsibilities of school finance can limit the number of mistakes and increase confidence when handling or resolving any finance problems. This study of the NJASK results is expected to provide valuable information for educational institutions. Furthermore, the results could be used to guide decisions for planning educational programs, making choices for spending fiscal funds, and to achieving proposed educational objectives (Brimley & Garfield, 2005).

The purpose of this study was to compare language arts and mathematics scores of students in Grades 6, 7, and 8 to discern if the allocation of fiscal resources impact student achievement. I used the NJASK test results from the 2011-2012 school year in a New Jersey school district. Expenditure, demographic, and student data were obtained from the State of New Jersey Department of Education and the United States Department of Education. Improvement District Survey data were obtained from the New Jersey school district.

### **Theoretical Framework**

The theoretical basis of this study was to examine the relationship between resource allocation and students' academic performance as measured by the NJASK test results. NCLB (2001) mandated the use of standardized assessments as a method to foster student academic achievement with the intent to close the gap between the advantaged and disadvantaged students (New Jersey Department of Education, 2012). Hanushek and Lindseth (2009) claimed that

It is time to recognize that the finance system can be an important tool not only in paying for needed resources and programs (its present role) but also in motivating students, teachers, and school administrators to find more effective solutions. (pp. 6-7)

The constructivist theory guided me to explore the achievement disparity based on socioeconomic status. Constructivism is defined as a “theory of learners constructing meaning based upon their previous knowledge, beliefs, and experiences” (Lambert, et al, 2002, p. 1).

State agencies are required to set goals addressing the provisions of NCLB. When these goals are not met, consequences follow such as lack of school choice and loss of federal funding. The Education Funding Report, published by the State of New Jersey stressed great concern about the achievement gap despite increases in funding (New Jersey Department of Education, 2012). More detailed information about New Jersey school funding is provided in Section 3.

Most importantly, when examining test data, school leaders cannot ignore the disparity in performance between the economically advantaged and disadvantaged students. In high stakes testing, it is the duty of school leaders to create an environment of high expectations to support students and allow a set of norms for teacher growth (New Jersey Department of Education, 2012). Having a greater knowledge of the changing learning process is key to understanding why constructivism is an effective approach for our society. In Section 2, I will discuss constructivist leadership and the school district.

## Operational Definitions

*Accountability:* For the purpose of this study, accountability refers to individuals and organizations responsible for closing the achievement gap and improving student achievement (Brimley & Garfield, 2005).

*Achievement gap:* A difference in scores on achievement test among certain groups of students. For example, there is a strong connection between poverty and students' lack of achievement (New Jersey Department of Education, 2012).

*Adequacy of funding:* A level of funding that would allow the local education authority to provide a variety of educational programs to support student achievement of state determined standards (U.S. Department of Education, 2012).

*Adequate Yearly Progress (AYP):* As a part of NCLB, AYP is a set of academic performance benchmarks that are reported for significant subgroups at individual schools. Each year, a percent of students tested must perform at or above proficiency levels for their grade. If those goals are not met; schools could enter program improvement (New Jersey Department of Education, 2012).

*Advantaged students:* Students who have greater resources, better skills, and educational facilities that contribute to academic achievement (New Jersey Department of Education, 2014).

*Attendance daily average:* Total number of days of student attendance divided by the total number of days in the school year. This measure is used to determine funding (New Jersey Department of Education, 2012).

*Categorical funding:* Funds from the state or federal government given to districts or schools for specific reasons such as special education, class size reduction, and students participating in the free lunch program. This money is an addition to money received for general education programs. Categorical funds represent about a third of district income (U.S. Department of Education, 2012).

*Disadvantaged students:* Students whose family, socioeconomic circumstances, and educational facilities hinder the ability to achieve academic success (New Jersey Department of Education, 2014).

*District factor group:* New Jersey ranking of school districts by socioeconomic status (New Jersey Department of Education, 2012).

*Elementary and Secondary Act of 1965 (ESEA):* The federal government first began to authorize funds to districts and states for the education of elementary and secondary students with low academic achievement who are enrolled in schools serving in low-income areas (New Jersey Department of Education, 2012).

*Equity:* Equalization of funding across per-pupil expenditures (Brimley & Garfield, 2005).

*Expenditure:* Amount of money spent by a school state or district divided by the number of students educated (Brimley & Garfield, 2005). In New Jersey, the number of students is determined by the average daily attendance (ADA).

*Federal education funding:* The executive and legislative branches annually determine federal allocations and revenues for schools and programs. The 1921 Budget and Accounting Act and the Congressional Budget Act of 1974 established many

procedures for formulating the budget. Key elements include: the president's budget request, the congressional budget resolution, and the appropriations process (Delisle & McCann, 2013).

*Free and reduced lunch:* Under the Title I federal regulations, qualifying students may receive lunch at a reduced price or for free. Families must reapply each year as financial status may change (Public School Review, 2012).

*High stakes testing:* Testing with a promotion or graduation result (New Jersey Department of Education, 2012).

*Individuals with disabilities Education Act (IDEA):* A law enacted by congress in 1975 to guarantee that children with disabilities receive a free appropriate public education (National Dissemination Center for Children with Disabilities, 2012).

*Instructional support expenditures:* Monies budgeted by a school district for the cost of direct instruction (U.S. Department of Education, 2012).

*New Jersey Assessment of Skills and Knowledge (NJASK):* A state test developed by the New Jersey Department of Education for students in Grades 3 through 8. It is designed to give schools information data pertaining to each student's achievement in the areas required by New Jersey's Core Curriculum Content Standards (New Jersey Department of Education, 2012).

*New Jersey Core Curriculum Content Standards:* Standards that describe what students should know and able to do after completing a 13-year public education program. Revised every 5 years, the standards offer local school districts with specific

and clear benchmarks for student achievement in nine content areas (New Jersey Department of Education, 2012).

*Revenue:* All funds received by a school system from external sources, including new refunds and other correcting transactions (Brimley & Garfield, 2005).

*Socioeconomic Status:* A measure of an individual or family's economic and social ranking (National Center for Education Statistics, 2010).

*Title I funding:* Federal program that provides funding to school districts based on the number of students eligible for the free and reduced lunch (New Jersey Department of Education, 2012).

### **Assumptions**

In this study, I assumed that the New Jersey public school district allocates and uses funds according to state and federal mandates. Additionally, I assumed that the expenditure, demographic, and student data received from the United States and New Jersey Departments of Education were accurate and complete. I further assumed that the responses of the teachers to the Improvement District Survey were honest and forthright.

### **Limitations**

The state of New Jersey has approximately 590 school districts and provides an education for over 1 million students. However, in this study, I focused on three grade levels across one district (5,387 students). Another limitation is that the school district participates in the free and reduced lunch program as reported by the Department of Education. Generalizations do not extend beyond the district studied.

### **Scope and Delimitations**

In the study, I focused on data from the state of New Jersey for the 2011-2012 school year, archived public data, and disaggregated school data (not individual score reports). Survey data were drawn exclusively from one district. The information data should be transferable to other districts with similar demographics.

### **Significance of the Study**

The goal of this study was to shed light on the issue of funding as it relates to student achievement. The success of schools is essential to society and the United States' place of leadership in the world. Furthermore, the level of education determines the family's wage earner well-being, and it effects many generations (Hanushek & Lindseth, 2009). If a mother and father drop out of high school, it is likely that their children are at risk of failing academically (Hanushek & Lindseth, 2009). A good education is vital to enabling even the poorest citizens to achieve the American dream in a global economy (Hanushek & Lindseth, 2009).

School districts continue to work to determine the most effective ways to allocate resources to improve student achievement. Evaluating the relationship between the allocation of fiscal resources and student achievement at the district/school level will allow for a closer analysis of how funds can be directed to achieve better results. Odden and Archibald (2001) commented that districts and schools around the country want to improve student achievement and further explained that the standards within the accountability framework are an individual school process with already acquired resources. In this study, I provide district, school administrators, teachers, and policy

makers information for improving the allocation of fiscal resources to support greater student success and add to the body of current research in this area.

### **Summary and Transition**

The mission and mandate for this New Jersey District is to ensure that the achievement gap between the disadvantaged will be closed with targeted support for students with the greatest needs as well as increasing accountability measures. NCLB stipulates the promise to raise the achievement level for all students, especially poor and minority students. This study is expected to provide data for educators to use for making fiscal decisions to improve educational outcomes for students.

Section 1 provided the background for the study, the problem statement, nature of the study, and purpose. The theoretical framework, definitions, assumptions, limitations, scope and delimitations, and the significance of the study are presented. Finally, Section 1 will provide a preliminary review of literature that will be discussed in more detail in Section 2.

In Section 2, I will provide an in depth discussion of the current research and literature related to this study. Specifically, Section 2 addresses the history of public education funding, New Jersey school funding, Title I funding, the role of federal education, special education funding, *Abbott versus Burke* (a litigation for New Jersey's minority and poor students), enforcement of *Abbott XX*, and constructivist leadership and the school district. I also highlight important district/school studies linking funding to student achievement.

Section 3 will provide a detailed description of the research design and methodology used for the study. In Section 4, I will present the results of the analysis of data for the study. The review of literature in Section 2 and information from this study will be used to enforce the conclusion and recommendations presented in Section 5.

## Section 2: Literature Review

### **Introduction**

In Section 2, I provide an overview of literature regarding resource allocation as it pertains to student achievement. To understand the degree to which funding could affect the language arts and mathematics achievement of students, it is necessary to present a historical viewpoint leading to New Jersey's high stakes reform.

A comprehensive search for literature relevant to resource allocation and student achievement (search words: *resource allocation and student achievement, school funding, finance and education, equity and education*) included using databases in the Walden University library, ProQuest, Educational Resources Information Center (ERIC), United States Department of Education, and State of New Jersey Department of Education. Information collected from published authors, educational journals, and prior studies were essential to the study.

### **History of Education Funding**

By 1906, state financing for public elementary and secondary schools began to develop in the United States. Cubberley (1906) was the first scholar to develop the concept of equalization education funding for schools. He revealed the problems with local financing of public education and requested state assistance. Cubberley stated that "one of the most important problems of today is how properly to finance the school system of a state, as the question of sufficient revenue lies back of every problem" (p. 3). Using statistical and quantitative methods, Cubberley collected an enormous amount of data pertaining to state school funding and made a definite conclusion. He found that

"what is a very slight effort for one community can be an average load for another and an excessive burden for a third" (p.201). These inequalities are mainly due to the centralization of population, wealth, and industry. To equalize education benefits, Cubberley recommended direct apportions to poor counties. Cubberley believed that funding for rural areas was inadequate and should be based on the number of teachers needed to run a school rather than the number of students being educated. Additionally, he championed incentives to promote local effort (taxation) beyond the required minimum (Cubberley, 1906).

Cubberley (1906) pointed out that states often believe that increasing funding for schools is needed but are unsure of how to distribute them to achieve the best results. This disparity contributes to large inequalities across a state. Furthermore, Cubberley reiterated the essential problem in funding arrangements during that time (and that continues to this day) and explained that the imposed uniform demands for education on towns and cities had disparate abilities meeting them. Cubberley's philosophy of public education funding is summarized in the following statement:

The duty of the state is to secure for all high a minimum of good instruction as is possible, but not to reduce all to this minimum, to equalize the advantages to all as nearly as can be done with the resources at hand, to place a premium on those local efforts which will enable communities to rise above the legal minimum as far as possible, and to encourage communities to extend their educational energies to new and desirable undertakings. (p. 17)

Cubberley has made notable contributions to the theory of funding education in the early twentieth century.

### **New Jersey School Funding**

Despite the increase in per-pupil expenditures, the achievement gap between the economically advantaged and disadvantaged (those who lack the skills necessary to thrive in the 21st century) students continues to increase. For example, in 2011, 76% of economically advantaged students in Grades 3 through 8 scored proficient on the language arts portion of the NJASK; only 45% of economically disadvantaged students in Grades 3 through 8 scored the same. What is most disconcerting is that the gap in language arts has increased by 5% since 2005, from 26% to 31% (National Assessment of Educational Progress; Department of Education, 2012). Even the mathematics portion of the NJASK shows disturbing results. Since 2005, the advantaged and disadvantaged gap has remained constant at 24% to 25% (National Assessment of Educational Progress; Department of Education, 2012).

Similarly, New Jersey ranked 50th out of 51 states, on the 2011 National Assessment of Education Progress in the size of the achievement gap between the economically advantaged and disadvantaged students in eighth grade reading. State and nationally administered tests are not the only measures used to close the achievement gap. Additionally, college readiness skills are measured (National Educational Assessment of Education Progress, 2012; Department of Education, 2012).

During the 2011-2012 school year, Newark, Camden, and Asbury Park New Jersey took additional financial measures to close the achievement gap but could not

meet the benchmark for college readiness. Thus, there should be no reason New Jersey's disadvantaged students are not achieving at the same levels of advantaged learners (Department of Education, 2012).

At the request of Governor Chris Christie, Acting Commissioner of Education, Christopher Cerf was asked to review the New Jersey's school funding formula for the purpose of making improvements. *The Education Funding Report*, published February 23, 2012 recommended alternative ways to use state education dollars more equitably at the district and school level. This report included recommendations to reform both funding and policy reforms. To preserve the overall liberality of the School Funding Reform Act formula (SFRA), the Department of Education recommended the reduction of certain weights used in the formula over the next 5 years. This will allow the treasury to properly budget the increased state aid over several years, which provides districts receiving less state aid with ample time to adjust their numbers to ensure that the state funds the formula. Moreover, to bring New Jersey in line with other states and funding districts, it is recommended that school attendance should be based on the enrollment count on the actual attendance throughout the year rather than the current law that bases enrollment on a single day.

The Educational Funding Report further explained that the legislature and past governors ignored the issue of how education dollars are spent. Most importantly, the report substantiates the goal of the Department of Education for closing the achievement gap to prepare students for college and a future career (Department of Education, 2012).

## **Title I Funding**

Title I Grants for school districts are authorized under the NCLB legislation of 2002. The intent of Title I funding is to guarantee the most financially and socially disadvantaged children have the opportunity to acquire a quality education and reach proficiency on challenging state academic assessments and standards (New Jersey Department of Education, 2012). The NCLB law approved allocation of Title I, Part A to local educational agencies that meet requirements of four separate formulas: basic grants, targeted grants, concentration grants, and education funding. Title I allocations for the state of New Jersey are based on state enrollment and free lunch data submitted on the Application for State School Aide the United States Department of Education reported each fall. The USDE formulates calculations for each district on record, based on census population, enrollment, and poverty counts of children aged 5 to 17. States are required to use allocations calculated by the USDE for districts with resident populations of 20,000 persons or greater. For districts with populations of less than 20,000, regulations allow reallocation of funds using state data (New Jersey Department of Education, 2012).

To protect from severe loss of Title I funding, hold-harmless provisions of the legislation mandate that eligible districts receives no less than 85% of the amount received the previous year. Once a district receives the Title I award, the funds must be allocated to the neediest schools in the district and include the largest portion of children in poverty (New Jersey Department of Education, 2012) . Schools are eligible for funds if 35% or more are poor children or the percent of poor children in the district is equal or greater than the percent of poverty children district wide. However, despite billions of

dollars and more than 40 years of legislation, Title I funding has yet to close the achievement gap between the high and low income students (New Jersey Department of Education, 2012).

### **The Federal Role in Education**

In 1867, the original Department of Education was created to gather information on teaching and schools to assist states with establishing effective school systems. Although the agency's location and name have changed over the past 130 years, an emphasis on acquiring information to education policy makers and teachers continues today. The Second Morrill Act in 1890 gave the Department of Education sole responsibility of administering support necessary for the original system of universities and land-grant colleges (U.S. Department of Education, 2014). Another major area of federal aid was to vocational education. The 1917 Smith-Hughes Act and the 1946 George-Barden Act focused on industrial, agricultural, and training in home economics for high school students (U.S. Department of Education, 2014).

Federal support for education expanded further due to World War II. The 1941 Lanham Act and the 1950 Impact Aid laws eased the burden of communities affected by the military presence or added federal installations by making payments to school districts. By 1944, the "GI Bill" sanctioned postsecondary education assistance to enable 8 million World War II veterans the opportunity to attend college. Federal support for education continued to grow and led to comprehensive legislation inspired by the Cold War. The Defense Education Act was passed in response to the Soviet launch of Sputnik in 1958. In order for the United States to compete with the Soviet Union in technical and

scientific areas, the Defense Education Act provided college students with loans for improvement in mathematics, science, foreign language instruction in elementary/secondary schools, graduate partnerships, foreign language, and vocational-technical training (U.S. Department of Education, 2014).

The equal access mission of the Department of Education brought about the emergence of the anti-poverty and civil rights laws of the 1960s and 1970s. Laws such as Title VI of the Civil Right Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973, which prohibited discrimination based on race, disability, and sex contributed to the Department of Education's mission. The Elementary and Secondary Act of 1965 launched comprehensive programs such as Title I, a program of federal aid to disadvantaged children living in poor areas and the Higher Education Act, which granted financial assistance for needy college students. In 1980, Congress upgraded the Department of Education to a cabinet level to coordinate most federal assistance directed by the secretary of education who will assist the president of the United States with implementing laws (U.S. Department of Education, 2014).

### **Special Education Funding**

The IDEA was established in 1975 to give children with disabilities the right to a free public school education (Aron & Loprest, 2012). Federal grants to states were authorized by Part B of the IDEA to cover most special education costs for pre-school and school-age children ages 3 through 21 (Aron & Loprest, 2012). The law has two standards of eligibility; children must at least have one specific impairment and need

special education services (Aron & Loprest, 2012). Aron and Loprest (2012) give further explanation for special education eligibility requirements:

The specific impairment and disabilities listed in the law are intellectual disabilities: hearing impairments, including deafness; speech or language impairments; visual impairments, including blindness; serious emotional disturbance; orthopedic impairments; autism traumatic brain injury; other health impairments; specific learning disabilities; deaf-blindness; and multiple disabilities requiring special education and related services. (pp. 99-100)

Part C of the IDEA was established as a federal program that focused on children with disabilities from birth through age 2. The goals of Part C under IDEA are to improve the development of infants and toddlers with disabilities, reduce education expenditures by minimizing the need future for special education, and provide states with federal grants to administer early intervention services (Aron & Loprest, 2012).

Federal, state, and local government programs fund special education programs. A study of comprehensive special education expenditures was conducted in the 1999-2000 school year by researchers Chambers, Pérez, Harr, and Shkolnik (2005). The researchers concluded that the United States spent \$50 billion on special education services and an additional \$27.3 billion in general education funding for special education students who spent part of their time in a general education classroom, totaling \$77.3 billion (Aron & Loprest, 2012). Twenty one percent of the U.S. total represents elementary and secondary spending. The amount of spending was a considerable increase from 1977-1978 when about 17% of education funds were spent on students

with disabilities (Aron & Loprest, 2012) . The increase in spending attributed to a greater number of children in special education rather than per-pupil costs (Aron & Loprest, 2012).

Federal funding for special education has always been moderately small. In 2010, the IDEA funding on special education was 12.5 billion, mostly in the form of grants (Aron & Loprest, 2012; U.S. Department of Education, 2010). The grants aided states with any additional costs for providing special education services to children from birth through age 21 (Aron & Loprest, 2012; U.S Department of Education, 2010). Moreover, discretionary grants were allotted by the federal government for personnel development, technical assistance, and parent information centers (Aron & Loprest, 2012; U.S. Department of Education, 2010). The intention of the IDEA is to assist states with the funding of special education. The original legislation for the federal contribution to special education is set at a maximum of 40% of the excess cost estimated for educating children with disabilities. However, federal funding has not been successful in closing the "full funding" cap (Aron & Loprest, 2012, p. 109).

While costs for special education have increased, federal spending has remained fixed. State funding for special education has declined leaving school districts to cover any additional expenses (Aron & Loprest, 2012). In the 1987-1988 school year, 56% of special education expenditures were funded by the states, 36% by local districts, and 8 percent by the federal government (Aron & Loprest, 2012; Moore, 1988). Distribution in funds for 1999-2000 was 40% from states, 46% from school districts, and 9% from the federal government (Aron & Loprest, 2012; Moore, 1988).

On the federal level, the formula for distributing state grant funds has been revised to limit the over identification of special needs children (Aron & Loprest, 2012). A portion of the grant funds is based on each state's number of children of school-age and children in poverty (Aron & Loprest, 2012). Aron and Loprest (2012) suggest that special education could provide incentives for identifying children in need to decrease the need for disability services. However, it remains uncertain which financing incentive is effective since incentives can differ by school districts or states (Aron & Loprest, 2012).

### **Abbott Versus Burke**

In 1981, a lawsuit was filed by the Educational Law Center (ELC) on behalf of 20 children attending public schools in Jersey City, East Orange, Irvington, and Camden. New Jersey's system of financing Public School Education of 1975 (Chapter 212) was challenged in a lawsuit (Education Law Center, 2011-2013). *Abbott versus Burke* is a historic case and is considered to be the most renowned and a significant litigation for minority and poor students since *Brown versus Board of Education* (1954). The ELC argued the state's process for funding education was unconstitutional because of disparities in the allocation between wealthy and poor districts. Poorer districts could not adequately meet the educational needs of their students. In 1985, the Abbott versus Burke case made it to the Supreme Court and was transferred to an administrative judge for a preliminary hearing (Education Law Center, 2011-2013). The New Jersey Supreme Court ruled that to satisfy the Constitution, the state must ensure urban children an education enabling them to compete with their suburban peers (New Jersey Department of Education, 2014).

### **Abbott XX Funding**

The New Jersey Legislature approved Governor Christie's fiscal year 2011 budget that slashed over \$1.1 billion in state aid from the SFRA (Education Law Center, 2011-2013). In July 2010, a motion was filed by the ELC on behalf of the Abbott Plaintiffs with the New Jersey Supreme Court. The motion was to implement circumstances of the *Abbott XX* ruling, focusing on the concerns of long-term constitutionality of the SFRA. Judge Peter Doyne ordered a remand hearing to consider whether school funding at the current levels could adequately support the New Jersey school children. Findings of the 2-week trial point out that the formula was underfunded by \$1.6 billion. Districts were not able to meet state academic standards, especially for students at risk (Education Law Center, 2011-2013).

Carefully considering Judge Doyne's report and hearing verbal arguments, the New Jersey Supreme Court found that there is significant harm to at-risk students across the districts due to the failure to fund the SFRA fully (Education Law Center, 2011-2013). Finally, the court brought forth that cuts infringes on the school children's right to a well-organized and quality education. In addition, the court ordered the *Abbott XXI* formula fully funded for the fiscal year 2012 for 31 urban districts in the greatest need (Education Law Center, 2011-2013).

### **Constructivist Leadership and the School District**

Constructivism provides a different perspective on how educational researchers and school leaders see the world. When learning experiences are mediated by reflection, query, and social interaction, meaningful knowledge will be constructed (Lambert, et al.,

2002). The school district's role should include helping to expand what is assessed and what assessment strategies are necessary to achieve learning goals as well as selecting allocation methods suitable for closing the achievement gap (Lambert, et al., 2002). Despite the pressure to order assessment and accountability policies to satisfy state and federal mandates, superintendents must ensure that the district strives to function consistently as a congruent, interdependent learning community which means including teachers, students, in the community in conversations to make meaning of state and federal mandates (Lambert, et al., 2002). Districts need to join the effort to develop a new constructivist paradigm which teachers' close assessment of students' understandings, peer feedback, and student self assessments are a central part of the social processes that arbitrate the development of academic abilities (Lambert, et al., 2002).

### **Studies Related to Research Question**

Lips, Watkins, and Fleming (2008) conducted a quantitative national study titled, "Does Spending More on Education Improve Academic Achievement?" to examine funding public education. The article explained that a rise in spending on K-12 education per student has increased over the past 20 years. These continuous spending increases have not corresponded with equal improvement in educational performance. A comparison of long-term spending trends by state with long-term measures of student academic achievement challenges the belief that spending is correlated with achievement. A focal point of education reform efforts has been to improve opportunities for disadvantaged students and to reduce the disparity between ethnic minority and white

children (Lips, Watkins, & Fleming, 2008). Polling data from 2004 through 2007 illustrated that most people agree that funds the government allocates to schools is insufficient (Rose & Gallup, 2007). Moreover, article suggests that policymakers should question whether historical evidence and academic research support this belief. Finally, the article emphasized that leading researchers in the area of acknowledgement agree that per-pupil expenditures on academic outcomes depends on how the money is spent and not on how much money is spent.

Peters and Oliver's (2009) paper, "Achieving Quality and Equity through Inclusive Education in an Era of High-Stakes Testing" presents a global perspective of the poor performance of high-stakes assessment policies. The authors argued:

While great progress has been made by the international community to promote inclusive education for all children, regardless of race, ethnicity, socio-economic status, gender or disability, many countries still continue to marginalize and exclude students in educational systems across the globe. (p. 265)

Elevated levels of centralization, inadequate per-pupil funding, and elevated numbers of achievement in low-performing schools are reasons why governments utilize high-stakes testing. Despite the inequalities and achievement gaps, governments deem high-stakes test beneficial to students' academic success (Peters & Oliver, 2009; Amrein & Berlinger, 2002 p. 48).

Peters and Oliver reviewed international data and research studies to analyze key assumptions and consequences of a market-based system of education model, school-community inclusive model, and examples from Europe and Latin America. The models

demonstrated that goals of quality and equity can be attained within systems that address education practices other than market-based reforms. Conclusions suggested that all policy makers respond to the discrimination and exclusion of diverse populations around the world and consider the impact of current educational models that support inclusive education for everyone.

Blankenau and Camera (2009) contributed to the education debate in a paper titled, "Public Spending on Education and the Incentives for Student Achievement." The paper explored the effects of government education spending on three key measures of policy performance: enrollment, the skill level of the workforce, and welfare. Theoretical research were drawn to develop insight into links between the motivation of students to succeed and the equilibrium distribution of human capital (e.g. Blankenau & Camera, 2006; Sahin, 2003). Three fundamental types of policy were considered such as decreasing the cost of private education, raising the productivity of education, reducing class size, and developing improved test procedures.

The analysis progressed in three steps: (a) illustrate how the policies affect student's incentives, (b) contrast the impact of the policies on equilibrium enrollment, skill level when incentives are weak, and strong, and (c) discuss welfare implications of the policies. Results of the analysis showed that fostering human capital accumulation is not merely a matter of spending public resources to increase enrollment. In reality, when student performance incentives are weak, some policies that are successful in increasing enrollment might have negative consequences on educational outcomes and aggregate

productivity. Furthermore, Blankenau and Camera pointed out the importance of financing education in ways to foster students' motivation to learn.

Manna's (2013) treatise on centralized approaches titled, "Centralized Governance and Student Outcomes: Excellence, Equity, and Academic Achievement in the U.S. States" theorized the effects of political, administrative, and fiscal centralization on student outcomes. Manna explains:

Although disagreements exist over merits of centralized or decentralized approaches, one policy domain in the United States has exhibited a generally consistent march toward greater centralization. That area is elementary and secondary education, henceforth simply "education." During the last several decades, state governments wielded their powers to reshape the institutions that govern schools and execute education policy. The pace of these changes has varied across states, providing a valuable arena for understanding the performance of reforms that centralize. (p. 684)

Manna tested competing hypotheses about the extent of centralization across the three dimensions is associated with the fostering academic excellence and equity.

The quantitative analysis used National Assessment of Education Progress performance data from grades 4 and 8 from the years 2003, 2005, 2007, and 2009. The study focused on two sets of dependent variables. The first set focused on students' reading and math achievement in grades 4 and 8. The second set examined the same grade levels but measured achievement gaps between students in poverty and students not in poverty. The findings showed a strong relationship between student outcomes and the

degree of political centralization and administrative centralization in a state, and there are no apparent associations with fiscal centralization. The study made two major contributions: (a) It is the first quantitative study of the relationship between state institutions of education governance and student achievement, and (b) the study considered multiple elements of centralization to provide a robust test of contrasting theoretical claims about centralized versus decentralized reforms (Manna, 2013).

Glen's (2006) "Separate But Equal: The Relation Between School Finance Adequacy Litigation and African American Student Achievement," addressed the degree that adequacy litigation functions as a means of narrowing the achievement gap. The scarcity of research connecting to adequacy litigation and student achievement prompted Glen to make an attempt to fill the void. The article provides evidence to illustrate that successful adequacy cases relate positively to African American achievement on the 2003 NAEP assessments. (A cross-sectional analysis was conducted to analyze the effects of litigation on student test scores.) However, the results of the quantitative study also revealed that factors usually outside the range of adequacy litigation, such as the racial composition of the school contributes to student outcomes. Consequently, Glen argued that adequacy litigation would be more effective in reducing the achievement gap if combined with nonmonetary remedies, such as the integration of public schools.

Harris and Herrington (2006) reported in the article titled, "Accountability, Standards, and the Growing Achievement Gap: Lessons from Past Half-Century," the rise in accountability policies during the early 1990s. The article explored the policies implemented to narrow the gap before 1990, the effects of the subsequent shift in the

direction of accountability, and lessons learned to for the future development of accountability systems. Despite substantial efforts by policy makers, the achievement gap between the advantaged and disadvantaged students continues to widen. The focal point of the article is to solve the resulting conundrum: Why did the achievement gap decrease during early standards movement but increase when accountability was implemented? An extensive review of research implied that the pre-1990s minority students were exposed to superior resources and academic content, factors contributing to reducing the achievement gap. NAEP and other sources were used to analyze the score trends.

In the article, "Can Judges Improve Academic Achievement?" Greene and Trivitt (2008) examined the effects of judicial intervention in school funding on student achievement. Both agreed that over the last three decades, student achievement in the United States remained unaffected even with increased per-pupil spending. Additionally, despite the efforts of national, state, and local leaders, none seem to arrive at the destination of school improvement. Greene and Trivitt further asserted that judges without any political pressures are better suited to recognize circumstances and strategies for effective school reform. The empirical research used to estimate student achievement were standardized test scores on the NAEP and graduation rates in 48 states from 1992 to 2005. Greene and Trivitt's analysis used the research design of Berry, author of *The Impact of School finance Judgments on State Fiscal Policy* (2007). One noteworthy change to made to Berry's analytical approach was substituting school spending dependent variables with student achievement dependent variables. The results of the

study concluded that there was no evidence that court-ordered changes in school funding improve student achievement (Green & Trivitt).

With the greater emphasis on the role of finance in education, Krumpe (2012) sought to study how schools used Title I and Title I stimulus funding processes of 15 elementary and middle schools in California to improve student achievement. Krumpe explains:

While researching data-driven decision-making, the theories, the design, benefits and cautions, very little attention was provided by researchers on what schools did with the research and how they applied resources decisions to their decision-making process. This gap in the research has become a major focus of my research questions. (p. 65)

The primary focus of the mixed-methods study was to determine if there were any correlations between expenditures and student achievement and to discover themes that existed in student improvement.

In order to isolate the factors that may increase student achievement through resource allocation, schools were selected based on analogous portion of student to teacher ratio, English language learners, students with disabilities, length of school day, and size. The analytical plan included using descriptive statistics to describe the demographics of the schools, the allocation of Title 1 and Title 1 stimulus funding, and the use of Title 1 and Title 1 stimulus monies during 2009-2010 through 2010-2011 school years. Findings of the study suggested that expenditures for professional development and programs for at-risk students played a key role in student achievement.

Overall, using Title I and Title I stimulus monies were beneficial to student achievement if spent effectively.

Harris and Herrington's study revealed little evidence that most forms of accountability placed a downward force on the achievement gap, signifying that the upward trend during the 1990s might be entirely coincidental. The few forms of accountability that aided in improving equity, including promotion-graduation exams, have the same goal as past favorable policies such as increasing student exposure to educational content. Results of the research suggest that fundamental assumptions must reflect most of the current reform movement in order to improve education equity. Specifically, *A Nation at Risk* (1983 education policy report commissioned by President Ronald Regan and Education Secretary T. H. Bell) has valuable information for No Child Left Behind and state-level accountability programs (Harris & Herrington, 2006).

Contreras (2010) stated, "Title I funding has not helped to close the achievement gap" (p. viii). This belief prompted an examination into the impact of Title I categories on student achievement. School budgets from 114 school-wide Title I elementary schools were collected and analyzed. The school-site budgets were categorized into eight categories of personnel, staff development, parent-education reading programs, math programs, technology, libraries, and miscellaneous. The relationship between the allocation percentages in each of the eight categories was measured by a multiple-regression equation. Linear equations were applied to predict future academic scores. There was no significant correlation between Title I spending allocations and student achievement.

Burris and Garrity (2009) featured their New York school district in the article titled, "Equity and Excellence." The article elucidates how efforts to improve schools have been diverted by debates about which is most important equity or excellence. Additionally, communities expect high test scores, challenging programs, and college acceptances. Most importantly, a growing number of parents were concerned that the emphasis on basic standards has drained resources from programs dedicated to providing opportunities for high-achieving children. The New York Rockville Centre School District achieved great success in the fight to close the achievement between the wealthy and low-income children by the process of detracking. Detracking involves students working together and learning from each other, no matter what ability level. The process of detracking is not a new phenomenon.

The district's reform effort is based on the belief that if teachers utilize the same high-level curriculum for all students, the achievement gap will narrow, and high achievers would continue to experience academic success. From 1996 to 2008, the minority students' regents' diploma rate rose from 32% to 94%. The district's special education students outpaced general education students in New York, with 87 percent earning a Regents diploma in 2008 (Burris & Garrity, 2009). Burris and Garrity concurred that if detracking is carefully implemented, excellence can be transformed.

O'Malley, Roseboro, and Hunt (2012) conducted an instrumental case study that places an emphasis on accountability initiatives during the decade of state mandated financial oversight for the East St. Louis, School District 189. The article, "Accountability, Fiscal Management, and Student Achievement in East St. Louis, 1994-

2006 Implications for Urban Education Policy," examines the financial stabilization of the East St. Louis District 189 between 1994 and 2004. Student performance on standardized tests remained below state average throughout the ten-year oversight period and beyond early years of NCLB despite the improvement in the district's finance. Making connections between student academic achievement and governance is necessary for urban schools. Urban schools disproportionately serve low income students and students of color who are not equally successful to White or economically secure students on standardized tests (O'Malley Roseboro, & Hunt, 2014; Fuller & Johnson, 2001). The study examined District 189 student results on the Illinois Standard Achievement Test and Preliminary Scholastic Aptitude Test for the first years of NCLB, overlapping with the final four years of the oversight panel's mandate. Finally, attendance, truancy, and graduation rates during the oversight process were reviewed.

Unterhalter (2009) responded to the need for clarity on the term *equity* in the article, "What is Equity in Education? Reflections from the Capability Approach." Unterhalter (2009) states, "While there is a substantial conceptual literature on equality in education, there has been little clarification on the term equity" (p. 415). The article differentiated three types of equity by observing in social context, major shifts in the meaning of the term (in English) that took place during the fourteenth, sixteen, and eighteen centuries. By terming equity from below (discussions in a political government), above (natural jurisdiction, courts), and from the middle (movement of ideas, time), presents a clearer analysis of the concern with multiplicity within the capability approach. To perform the analysis, Unterhalter drew on methods suggested by

Williams. Williams dealt with changes in the meaning of equality, but had no discussions about equity which suggests this is not the perplexing term in the mid 1970s it is today (Unterhalter, 2009; Williams, 1975, p. 13). Unterhalter concluded that to expand the capabilities in education, all the three forms of equity need placement in communication.

To determine the effect of per-pupil funding equity as it relates to Algebra I End of Instruction test scores in Oklahoma school districts, Byrant (2010) conducted a study to measure the level of achievement through quantitative methods and four different linear regressions to determine whether or not a correlation existed between the four independent variables (per-pupil expenditures, technology expenditures, Algebra I class size, and teacher salary schedules) and one dependent variable (Algebra I EOI student passing rates). Bryant's study responds to the legislature of the State of Oklahoma's mandate that ensures all students demonstrate mastery in certain courses to receive a high school diploma. Despite the debates of the usefulness of high stakes tests to measure student learning, such tests are mandated holding schools accountable for students' success or failure. The Pearson's Product Moment was used for the correlation of test data from 2007-2008. The results of the study did not show any positive significance between the variables and Algebra I EOI test passing rates. Additionally, the researcher suggested planning should be the blueprint to move the organization forward, and that proper planning will prevent district administrators from wasting of funds on other resources.

### **Summary and Transition**

Every year, students and teachers are expected to perform at a higher level than the previous year. The greatest challenge is the NCLB Act signed into law by President Bush in 2001. This legislation funds a number of programs intended to improve the academic performance of U.S. schools. Educators must be aware of the differences and prepare to change the odds for all students, especially the disadvantaged. The goal was for all students is to be 100% proficient in language arts literacy and mathematics by the year 2014 (Brimley & Garfield, 2005; New Jersey Department of Education, 2012).

The research conducted contributes to current research that investigated the relationship between allocation patterns and student performance. In honoring Walden's commitment to social change, this study supplied data and data analysis, which can be used to uphold the long distinguished tradition of education.

Section 3 provides the introduction to the methodology section, research design and approach, setting and sample, instrumentation and materials, data collection, and data analysis.

## Section 3: Research Method

### **Introduction**

The purpose of this study was to determine whether a significant relationship exists between resource allocation and student academic achievement on the NJASK test. In Section 3, I describe the research design and approach, setting and sample, instrumentation and materials, data collection, and data analysis procedures. The role of the researcher involved collecting, sorting, analyzing, and interpreting the data. Furthermore, personal biases about resource allocation and student achievement did not interfere with the integrity of the study.

The following question was addressed and hypotheses tested:

Is there a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores?

$H_0$ 1: There is no significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

$H_a$ 1: There is a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

A detailed description of the methodology and data analysis procedures is discussed in greater length in this section.

### **Research Design and Approach**

The research design for this study is quantitative. According to Creswell (2003), the hypotheses and research questions in quantitative research are based on theories to specify the relationship among variables. The quantitative approach was selected for the

study because it is based on variables measured with numbers and analyzed with statistical procedures. The use of quantitative methods allowed me to use precise numerical data for research results independent of the researcher. Furthermore, quantitative methods are useful to formulate predictions about large numbers of people. Qualitative and mixed methods were considered and were not appropriate designs for the study. Qualitative research (natural generalizations) takes more time to collect data and may have less credibility with some school administrators and policy makers, research bias is unavoidable, labor can be expensive, and it does not fit into my timeline. Mixed methods research (integration of both perspectives) may be difficult to combine or interpret data, and methodological purists believe that researchers should select either qualitative or quantitative not both (Creswell, 2003; Johnson & Onwuegbuzie, 2004).

### **Rationale for Use of Correlation Regression**

In education, typically multiple variables are considered when analyzing relationships among different phenomena. Given the nature of the issues surrounding school funding, it would be impossible to separate a single factor to examine the effects on student achievement (Lomax, 2007). Two research approaches were considered for the study, correlation regression and ex facto. Although both approaches could support the research, the ex facto approach was rejected. I merely sought to find a statistical and cause and effect relationship using archival data. Grade level data from one school district were used. No comparisons to other districts were made, and data from previous years were not considered. Furthermore, the grade levels presented do not differ on

expenditure variables. A correlation regression approach provided a basis for investigating the question and hypotheses presented in this study.

With the research question for this study, I sought to determine if there is a significant relationship between the allocation of fiscal resources and students' test scores (Grades 6, 7, and 8) in language arts and mathematics. A correlation analysis was performed to examine the relationship between the dependent variable, NJASK test scores to the expenditure variables: salaries for teachers, government-wide school based expenditures, educational media services/school library, other purchased services, and general supplies. Additionally, I used a multiple linear regression analysis on the expenditure variables to determine whether the relationships between the variables were statistically significant.

A web-based Improvement District Survey (Appendix B) was given to teachers to measure the degree of agreement to individual items (multiple choice, check all that apply [CATA], and 4-point Likert scale questions) relating to finance allocation. Teacher input was valuable to this study because teachers have a direct influence on student performance and should be part of the decision-making process concerning how to use fiscal resources effectively to improve students' outcome. A descriptive statistical analysis was performed on the results.

### **Setting and Sample**

The sample used for this study was sixth, seventh, and eighth grade students in a New Jersey district. There were 5,387 students combined. Data collected for the study were from standardized testing (NJASK) rather than direct student contact. The district

was selected because it is an Abbott district and is classified as being in District Factor Group "B," - the second lowest of eight groupings. District factor groups are organized statewide to allow comparison by common socioeconomic characteristics and provide a useful tool for examining student achievement on standardized tests (New Jersey Department of Education, 2005). The New Jersey district provides a comprehensive education to grades pre-kindergarten through 12. The services include regular developmental programs, vocational programs, and programs for special needs students. Additionally, the district participates in the free and reduced lunch program and receives Title I funding. More importantly, the New Jersey Commissioner of Education is authorized to intervene in curriculum functions for the district (Department of Education, 2012).

A web-based Improvement District Survey (self-administered questionnaire), accessed through the URL, was sent to 143 teachers who teach Grades 6 through 8. The survey took about 10 minutes to complete. Surveying 143 teachers was sufficient for an acceptable response rate of 20%. To maintain the confidentiality of the data, the name of the district is not revealed, and the student groups did not contain any individual identifiable information. Assigned numeric values for the variables and categories were used. A nonrandom sampling technique (convenience) was used when selecting the grade levels. All data were downloaded from the server and analyzed by me. Parent and student consent forms were not required to collect archival data.

### **Instrumentation and Materials**

The instrument used to collect data for this study was the Improvement District Survey for teachers (Appendix B). Pan, Rudo, Schneider, and Smith-Hansen (2003) created the survey in partnership with the Southwest Educational Developmental Laboratory (SEDL). SEDL granted me permission to use the instrument for this study (Appendix C).

The instrument is comprised of three sections. Part 1 is a multiple choice section that contains three questions about teaching experience and school characteristics, and one question about student performance. Part 2 is comprised of 2 questions in the CATA format about strategies implemented to improve student achievement over the past 5 years and the barriers/challenges that are obstacles to achieving student performance. Part three is comprised of 3 statements constructed on a 4-point Likert format of *agree* (A), *agree somewhat* (AS), *disagree somewhat* (DS), and *disagree strongly* (DS) to district and school practices. *To a great extent* (GE), *to some extent* (SE), *very little* (LE), and *not at all* (NE) are choices for a list of factors that influence how the district allocates resources. I used this survey instrument to measure the degree of agreement to the individual items and gained a teachers' perspective of school/district allocation practices.

### **Reliability and Validity**

The validity of the instrument used to collect data and reliability of the results are extremely crucial in quantitative research (Creswell, 2003). A pilot study was conducted by SEDL to address reliability and validity concerns in the development of the survey instrument. The instrument was given to teachers with classroom teaching experience

(not part of the study conducted by SEDL) to gain a classroom-level view of effective practices, barriers, and challenges regarding district and school resources. Pilot participants provided comments concerning language clarity, survey length, and suggestions for additional questions. Pilot testing of the interview instrument provided a means for evaluating the internal consistency of the interviewer methods (Southwest Educational Development Laboratory, 2002). To address inter-rater reliability, SEDL researchers coded the survey data. At least one interviewer who conducted the focus group interview reviewed the coding results. Survey data were entered into FileMaker Pro database to check validity. Based on feedback from pilot study participants, SEDL researchers made revisions to the survey, and a final version was created to be distributed to school districts between October 2001 and January 2002 (Southwest Educational Development Laboratory, 2002).

### **New Jersey Assessment of Skills and Knowledge (NJASK)**

The NJASK is a New Jersey annual accountability test. It is a criterion-referenced assessment developed by the New Jersey Department of Education. There are different assessments for each grade that are aligned with the state mandated curriculum, which is codified as the NJASK. (New Jersey Department of Education, 2012). The language arts literacy scores for Grades three through eight are reported as scale scores, with score ranges as follows: partially proficient (100-199), proficient (200-249), and advanced proficient (250-300) (New Jersey Department of Education, 2012). The NJASK accommodated version is for special education students with individual

education plans and the Limited English Proficient is for students whose native language is other than English.

It is required by federal law that the instruments the Department of Education uses to measure achievement for school accountability provide reliable results (New Jersey Department of Education, 2012). Cronbach's coefficient alpha was used to estimate the consistency of individual student performance (New Jersey Department of Education, 2012). Coefficient alpha is the proportion of the total score variance that may be attributed to a student's true score variance. Furthermore, coefficient alpha is an index of internal consistency suitable for use on untimed NJASK tests (New Jersey Department of Education, 2012). In order to make sure NJASK assessments are valid,  $p$ -value estimates were used as statistical targets for the test assembly. A point bi-serial correlation was used to measure how items discriminate among test takers. This correlation is closely related to the reliability of the test, and proportion correct value is an indication of test difficulty (New Jersey Department of Education, 2012).

Records for special education and limited English proficient students were excluded from the analysis. I wished to focus on general education students who are in the classroom full time (without resource support).

### **Data Collection**

Data for this study were obtained from the following sources: State of New Jersey Department of Education, United States Department of Education, and the New Jersey Public School Annual/Comprehensive Reports 2011-2012 (expenditure, demographic, and district test score results). Only records containing general education results from the

NJASK in language arts and mathematics for Grades 6, 7, and 8 from the 2011-2012 school year were combined into a single Excel file for a correlation and multiple linear regression analyses. The test data were opened, sorted, and assigned numeric values for the variables and selected schools.

A web-based Improvement District Survey (self-administered questionnaire), accessed through the URL, was sent to 143 teachers who taught Grades 6 through 8 and took approximately 10 minutes to complete. One advantage of a web-based survey is that the responses of the participants are automatically stored in a database and can be transformed into numeric data in SPSS or Excel formats (Creswell, 2003). Certified teachers with classroom experience were the focus of the survey. A nonrandom sampling technique (volunteer) was used to select the participants. A Study Statement Consent Form (Appendix D) was posted on the web as an opening survey page. Participants clicked on the "Go to survey link" expressing their consent to participate in the study and complete the survey. As a measure to ensure anonymity, the respondents were asked not to provide any personal identifying information.

A week before the survey was available on the web, participants received an e-mail notification (Appendix E) from me that provided information about the study and its importance and informed them that they would receive a consent form and link to the study the following week. This process helped the low response rate, a problem for most web-based surveys (Creswell, 2003). In order to obtain a higher response rate of the survey, a three-phase follow-up sequence was used. To those subjects who did not respond by the set date: (a) 5 days after posting the survey URL, an email reminder

was sent; (b) 5 days later, a second email reminder was sent; (c) 1 week later, a third email reminder was sent affirming the importance of the participant's input for the study. An acceptable return rate would have been 20% (Creswell, 2003).

Results of the Improvement District Survey (Appendix B) provided this study with an educator's viewpoint of effective practices, barriers and challenges regarding the allocation of resources to support student achievement. I gathered the web-based response data and merged it into a separate Excel file to prepare for a descriptive statistical analysis. Numeric values were assigned to represent questions and categories.

### **Rights Protection of Participants**

Measures were taken to ensure the rights of the participants. No data were collected until the institutional review board (IRB) approved the study (Walden University IRB# 03-17-15-0033678). Permission to conduct the study was obtained from a chief of staff in the New Jersey school district on May 19, 2014 (Appendix A). Any information obtained from expenditure, demographic, student data, and online survey were kept confidential. All data were downloaded from the server and analyzed by me. I did not include names or anything that could be identified in study reports.

Participation in this study was voluntary. Web-based survey participants had the right to change their mind during or after the study. Data were kept secure by storing them on a password protected laptop computer and backed up on a password protected USB drive. The USB drive was placed in a locked file cabinet and kept separate from the laptop computer. As requested by Walden University, the data will be kept for a period of at least 5 years.

**Role of the Researcher**

I have been a tenured social studies teacher in the New Jersey school district (Grades 6-8) for 6 years. Previously, I taught language arts (Grades 4-8) for 8 years in the same district. My dual roles include that of a social studies teacher and researcher. Serving as a social studies teacher, I have direct contact with most of the Improvement District Survey participants and did not have any conversations to affect the outcome of the data. The survey was not administered under adverse conditions, and no fee was paid for responses. Moreover, I have kept records on the research process, data analysis, and problems encountered. As a researcher, I brought some biases about resource allocation and student achievement to the study. These biases did not interfere with the integrity of the study, as the study is based on statistical procedures and participant input (web-based survey) rather than that of the researcher. One bias I have is that social change and school equity could occur through activism. Another bias I hold is against the great emphasis on standardized testing.

My role in this quantitative research process involved collecting, sorting, analyzing, and interpreting the data. After the data collection process, I used the data to generate various statistics that describe and give summary to the important characteristics of the sets of data. I used the Statistical Package for the Social Sciences (SPSS version 21) to perform computations needed to answer the research question. The interpretation phase of this process involved interpreting the results, explaining the results, and making generalizations from the statistical analysis.

### **Data Analysis**

The Excel spreadsheet containing district test results for language arts and mathematics were uploaded to the Statistical Package for the Social Sciences (SPSS version 21). A correlation analysis was performed (language arts and mathematics grade level data) to see how related the dependent variable NJASK test scores (percentage correct) is to the expenditure variables: salaries for teachers, government-wide school based expenditures, educational media services/school library, other purchased services, and general supplies. Correlation coefficients were generated to determine the level of strength and direction of the relationship between the independent (test scores) and dependent (expenditure) variables (Griffith, 2010; New Jersey Department of Education, 2012).

A multiple linear regression analysis on the expenditure variables was conducted to determine whether the relationships between the variables were statistically significant. The District Improvement Survey results were uploaded to a separate Excel spreadsheet. A descriptive statistical analysis was performed to test for significant differences in the perception of teachers about resource allocation and student achievement. A descriptive breakdown of the teacher responses was generated.

### **Summary**

The purpose of this study was to compare language arts and mathematics scores of students in Grades 6, 7, and 8 to discern if the allocation of fiscal resources impact student achievement. The research design for this study is quantitative, and the research question was answered through the use of correlation and multiple linear regression. An

online Improvement District Survey was given to teachers to measure the degree of agreement to individual items relating to resource allocation. A descriptive statistical analysis was performed on the results. Specific measures were taken to ensure the rights of the participants. The implications for positive social change are providing district, school administrators, teachers, and policy makers with information for improving the allocation of fiscal resources to support increased student achievement, and adding to the current research of allocation patterns and student performance.

## Section 4: Results

### **Introduction**

In Section 4, I present a description of the results of the data analysis. The data collected in this study were analyzed specifically to address the research question and hypotheses. The results provided in this section are divided into four subsections: setting and sample, data analysis, Improvement District Survey for Teachers results, and summary of the findings.

This purpose of this study was to determine if a significant relationship exist between the allocation of fiscal resources and student achievement as measured by test scores. The achievement gap between the economically advantaged and disadvantaged (lack the skills necessary to thrive in the 21st century) students continues to increase despite the raise in per-pupil expenditures. The goal for all students was to be 100% proficient in language arts literacy and mathematics by the year 2014. Being aware of the daily responsibilities of school finance can limit the number of mistakes and increase confidence when handling or resolving any finance problems. This study of the NJASK results is expected to provide valuable information for educational institutions. Furthermore, the results could be used to guide decisions for planning educational programs, make choices for spending fiscal funds, and achieve proposed educational objectives.

The results were analyzed by computing Pearson Product-Moment correlation coefficients between the achievement scores of Grades 6, 7, and 8. A multiple linear

regression analysis on the expenditure variables was conducted to determine whether the relationship between the variables were statistically significant to the level of 0.05.

The following question was addressed and hypotheses tested:

Is there a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores?

$H_0$  1: There is no significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

$H_a$  1: There is a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

A web-based Improvement District Survey (Appendix B) was given to teachers to measure the degree of agreement to individual items (multiple choice, CATA, and 4-point Likert scale questions) relating to finance allocation. Teacher input was valuable to this study because teachers have a direct influence on student performance and should be part of the decision-making process concerning how to use fiscal resources effectively to improve students' outcome. A descriptive statistical analysis was performed on the results. A detailed description of the results of the analysis (district test data and survey) and how it relates to the research question will be discussed in greater detail in this section.

### **Setting and Sample**

Grades 6, 7, and 8 were selected from the New Jersey district. Enrollment for the grade levels totaled 5,387. Standardized test data (NJASK) were collected rather than direct student contact. The district was selected because it is an Abbott district and is

classified as being in District Factor Group “B,” the second lowest of eight groupings. District factor groups are organized statewide to allow comparison by common socioeconomic characteristics and provide a useful tool for examining student achievement on standardized tests (New Jersey Department of Education, 2005). A comprehensive education is provided for grades pre-kindergarten through 12. Educational services include regular developmental programs, vocational programs, and programs for special needs students. Additionally, the district participates in the free and reduced lunch program and receives Title I funding. More importantly, the New Jersey Commissioner of Education is authorized to intervene in curriculum functions for the district (New Jersey Department of Education, 2012).

A web-based Improvement District Survey (self-administered questionnaire) was sent to 143 certified classroom teachers who teach Grades 6 through 8 and took approximately 10 minutes to complete. Surveying 143 teachers was sufficient to obtain an acceptable response rate of 20%. Twenty-three percent of the surveys were returned. To maintain the confidentiality of the data, the name of the district was not revealed, and the student groups did not contain any individual identifiable information. Assigned numeric values for the variables and categories were used. To select the grade levels, a nonrandom sampling technique (convenience) was used. All data were downloaded from the server and analyzed by me. Parent and student consent forms were not required to collect archival data.

## Data Analysis

In this study, I examined the relationship between resource allocation and student achievement through the comparison of standardized test scores in language arts and mathematics. An actual blended expenditure budget for the fiscal year ending in 2012 was reviewed for seventeen schools in the New Jersey district with sixth, seventh, and eight grade enrollment (5,387). In order to generalize the results from the sample population, the grade level test results from each school were averaged. A dataset was created in SPSS to include the study population data and, dependent, and independent variables. The results are reported in 5 sections for language arts and mathematics: (a) salaries for teachers, (b) government-wide school based expenditures, (c) educational media services/school library, (d) other purchased services, and (e) general supplies.

### Salaries for Teachers and Student Achievement

The relationship between resource allocation and student achievement was analyzed by computing Pearson Product-Moment correlation coefficients between these expenditures and the achievement scores of Grades 6, 7, and 8. A multiple linear regression was conducted on the salaries for teachers variable to determine whether the relationship between these variables is statistically significant.

Table 1 shows the calculated correlations coefficients (Pearson  $r$ ), correlation of determination ( $r^2$ ),  $F$ -ratios, and  $p$ -values between the independent variable (salaries for teachers) and the dependent variable (student achievement in Grades 6, 7, and 8).

Table 1

*Salaries for Teachers as Correlates of Student Achievement*

	<u>Pearson <math>r</math></u>	<u><math>r^2</math></u>	<u><math>F</math>-ratio</u>	<u><math>p</math>-value</u>
Language arts	0.107	0.012	0.175	0.682
Mathematics	0.071	0.005	0.076	0.786

The results presented in Table 1 indicate that salaries for teachers are not significantly related to student achievement for either test subject. The calculated  $F$ -ratios on both test subjects have  $p$ -values that exceed the alpha level of 0.05. Even where the language arts show the  $r^2$  value of 0.012, a higher correlation than the mathematics  $r^2$  value of 0.005, a mere 1% of the variation in the achievement variable is accounted for by teacher salary. The alternative hypothesis for both mathematics and language arts is rejected, and the null hypothesis is accepted.

### **Government-Wide School Based Expenditures and Student Achievement**

The relationship between resource allocation and student achievement was analyzed by computing Pearson Product-Moment correlation coefficients between these expenditures and the achievement scores of Grades 6, 7, and 8. A multiple linear regression was conducted on the government-wide school based expenditures variable to determine whether the relationship between these variables is statistically significant.

Table 2 shows the calculated correlations coefficients (Pearson  $r$ ), correlation of determination ( $r^2$ ),  $F$ -ratios, and  $p$ -values between the independent variable (government-wide school based expenditures and student achievement) and the dependent variable (student achievement in Grades 6, 7, and 8).

Table 2

*Government-Wide School Based Expenditures as Correlates of Student Achievement*

	<u>Pearson <math>r</math></u>	<u><math>r^2</math></u>	<u><math>F</math>-ratio</u>	<u><math>p</math>-value</u>
Language arts	0.068	0.005	0.07	0.794
Mathematics	0.098	0.01	0.146	0.707

The results presented in Table 2 indicate that government-wide school based expenditures are not significantly related to student achievement for either test subject. The calculated  $F$ -ratios on both test subjects have  $p$ -values that exceed the alpha level of 0.05. Although the mathematics show the  $r^2$  value of 0.01, a higher correlation than the language arts  $r^2$  value of 0.005, about 1% of the variation in the achievement variable is accounted for by government-wide school based expenditures and student achievement. The alternative hypothesis for both mathematics and language arts is rejected, and the null hypothesis is accepted.

### **Educational Media Services/School Library and Student Achievement**

The relationship between resource allocation and student achievement was analyzed by computing Pearson Product-Moment correlation coefficients between these expenditures and the achievement scores of Grades 6, 7, and 8. A multiple linear regression was conducted on the educational media services/school library variable to determine whether the relationship between these variables is statistically significant.

Table 3 shows the calculated correlations coefficients (Pearson  $r$ ), correlation of determination ( $r^2$ ),  $F$ -ratios, and  $p$ -values between the independent variable (educational

media services/school library) and the dependent variable (student achievement in Grades 6, 7, and 8).

Table 3

*Educational Media Services/School Library as Correlates of Student Achievement*

	<u>Pearson <math>r</math></u>	<u><math>r^2</math></u>	<u><math>F</math>-ratio</u>	<u><math>p</math>-value</u>
Language arts	0.467	0.218	4.193	0.059
Mathematics	0.501	0.251	5.02	0.041

The results presented in Table 3 indicate that while there is no significant relationship between language arts and educational media services/school library, there is a significant mathematics relationship. The calculated  $F$ -ratio for language arts has a  $p$ -value of 0.059, just 0.09 over the 0.05 alpha level used for this study. Therefore, the alternative hypothesis is rejected for language arts, and the null hypothesis accepted. The calculated  $F$ -ratio for mathematics has a  $p$ -value of 0.041, showing there is a significant relationship and approximately 25% of the variation in the dependent variable (mathematics achievement) is accounted for by the independent variable (educational media services/school library). Hence, the alternative hypothesis for mathematics is accepted and the null hypothesis is rejected.

### **Other Purchased Services and Student Achievement**

The relationship between resource allocation and student achievement was analyzed by computing Pearson Product-Moment correlation coefficients between these expenditures and the achievement scores of Grades 6, 7, and 8. A multiple linear

regression was conducted on the other purchased services variable to determine whether the relationship between these variables is statistically significant.

Table 4 shows the calculated correlations coefficients (Pearson  $r$ ), correlation of determination ( $r^2$ ),  $F$ -ratios, and  $p$ -values between the independent variable (other purchased services) and the dependent variable (student achievement in Grades 6, 7, and 8).

Table 4

*Other Purchased Services as Correlates of Student Achievement*

	<u>Pearson <math>r</math></u>	<u><math>r^2</math></u>	<u><math>F</math>-ratio</u>	<u><math>p</math>-value</u>
Language arts	0.274	0.075	1.218	0.287
Mathematics	0.364	0.132	2.289	0.151

The results presented in Table 4 indicate that other purchased services are not significantly related to student achievement for either subject. The calculated  $F$ -values for both subjects have  $p$ -values that exceed the alpha level of 0.05. The mathematics result shows a  $r^2$  value of 0.132, a higher correlation than language arts value of 0.075, indicating that 13% of the variation in the achievement variable is accounted for by other purchase services. The alternative hypothesis for both mathematics and language arts is rejected, and the null hypothesis is accepted.

### **General Supplies and Student Achievement**

The relationship between resource allocation and student achievement was analyzed by computing Pearson Product-Moment correlation coefficients between these expenditures and the achievement scores of Grades 6, 7, and 8. A multiple linear

regression was conducted on the general supplies variable to determine whether the relationship between these variables is statistically significant.

Table 5 shows the calculated correlations coefficients (Pearson  $r$ ), correlation of determination ( $r^2$ ),  $F$ -ratios, and  $p$ -values between the independent variable (general supplies) and the dependent variable (student achievement in Grades 6, 7, and 8).

Table 5

*General Supplies as Correlates of Student Achievement*

	<u>Pearson <math>r</math></u>	<u><math>r^2</math></u>	<u><math>F</math>-ratio</u>	<u><math>p</math>-value</u>
Language arts	0.117	0.014	0.209	0.654
Mathematics	0.143	0.021	0.314	0.583

The results presented in Table 5 indicate that general supplies are not significantly related to student achievement for either subject. The  $F$ -ratios for the subjects have  $p$ -values that exceed the alpha level of 0.05. The mathematics test shows a  $r^2$  value of 0.021, a higher correlation than the language arts  $r^2$  value of 0.014, indicating a 1% variation in the achievement variable is accounted for by general supplies. The alternative hypothesis for mathematics and language arts is rejected, and the null hypothesis accepted.

### **Improvement District Survey for Teachers**

The analysis of fiscal spending and student achievement indicated that resource allocation is not linked to student performance. This finding is significant because it makes apparent that schools and districts need to find alternative ways to boost student achievement without requesting additional funding. Hanushek and Lindseth (2009)

agreed that "more spending on schools has not been translated into substantially better results" (p.57). In this section, I discuss the findings from the survey in order to understand the perception of teachers about the allocation of resources to support student performance.

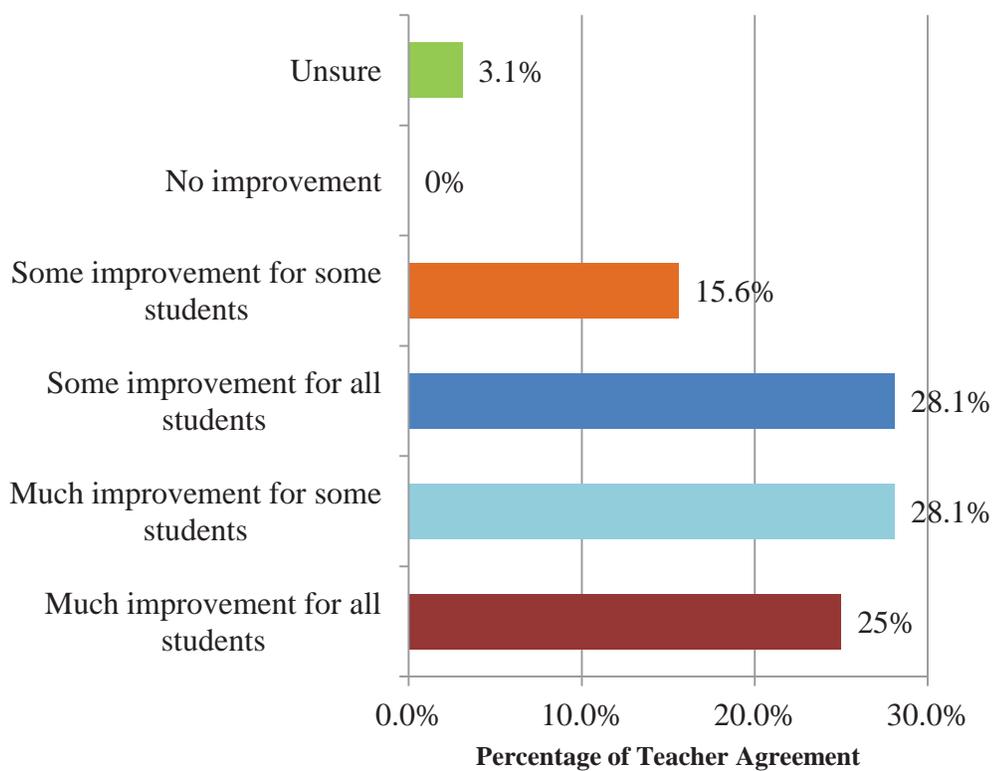
### **Data Analysis**

Teachers answered the survey questions anonymously and were assured of the confidentiality of their responses. Consequently, 143 invitations were sent to teachers in one New Jersey district. Thirty-three teachers returned useful responses, and two opted out of the survey which resulted in a 23.1% response rate. The survey data were uploaded into one Excel spreadsheet for a quantitative analysis. A descriptive statistical analysis was performed on the survey to categorize common themes expressed by respondents. Using descriptive statistics presents the data in a more consequential way, which allows a straightforward interpretation of the data (Laerd Statistics, 2013). The quantitative analysis included descriptive statistics such as percentages, mean, and standard deviation. The results are summarized and reported in tabular form.

### **Student Performance Gains**

The NJASK test results provided the primary foundation for the understanding that the New Jersey District is focused on improving students' academic achievement (New Jersey Department of Education, 2012). Results from the Improvement District Survey further clarified that the district has engaged in a variety of accountability measures to achieve their goals. When asked about students' performance gains in the last five years, a large majority of teachers in the district (96.9%) concurred that their

students made improvement. More than half (53.1%) of the respondents reported that all students made at least some improvement. The other 43.8% reported that some students made progress. Three percent of the teachers are unsure if any improvement occurred. Responses for the student performance gains are shown in Figure 1.



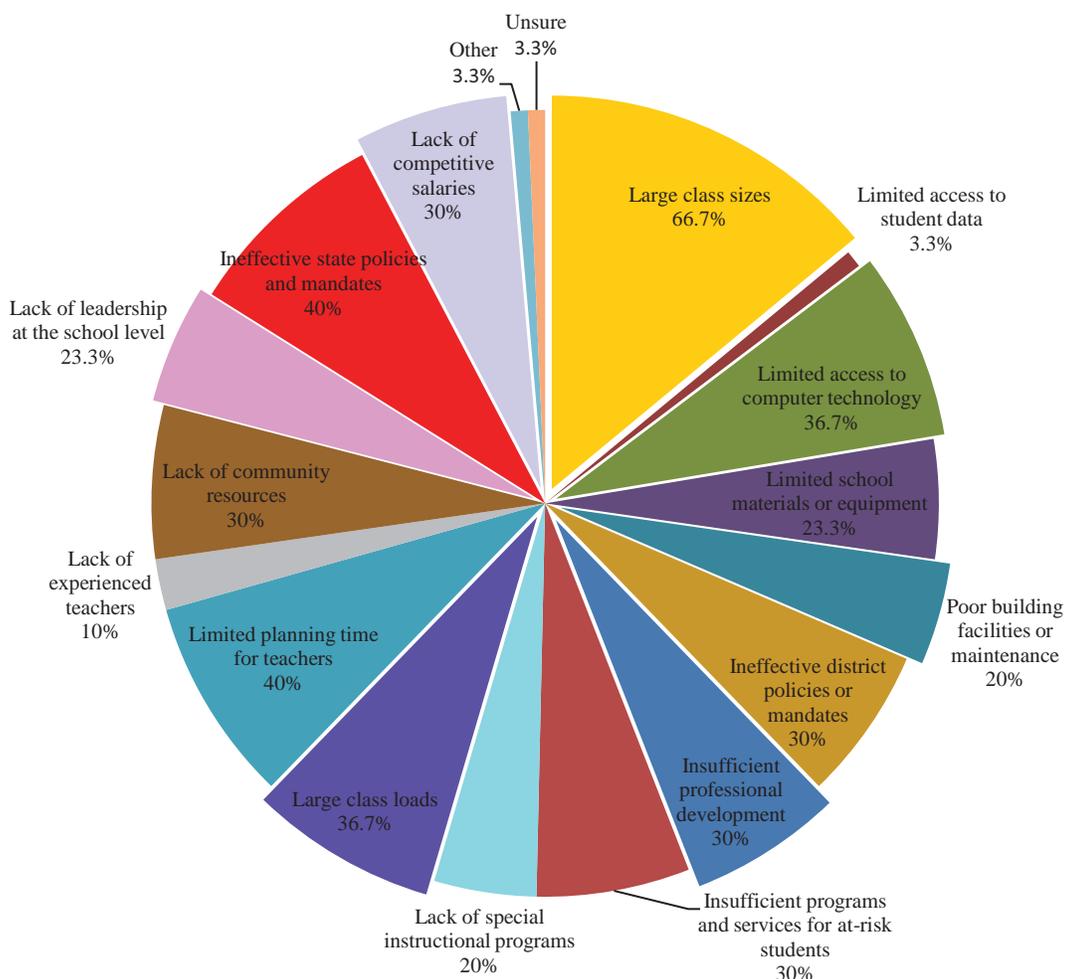
*Figure 1* Teacher perception of student performance

## **Barriers and Challenges of Achieving Student Performance**

Every dedicated teacher has the desire to see every student improve academically. However, there are many obstacles that prevent most teachers from achieving that goal. According to the survey, teachers identified the barriers and challenges that hinder accountability (see Figure 2). On average, 66.7% of teachers identified large class sizes as one of the greatest barrier for achieving student performance. Limited planning time for teachers is another barrier faced by 40% of the educators. Professional development continues to be in conflict with the need to be efficient in the classroom. Forty percent of the teachers also identified ineffective state policies and mandates as barriers to improve student performance. Ineffective state policies and mandates can only add to the achievement gap. Furthermore, 36.7% of the teachers agreed that limited use of computer technology and large class loads inhibit students' academic performance. Smaller class sizes and having greater computer resources can lead to higher achievement leading to narrowing the achievement gap.

The obstacles to achieving student performance in the past five years have been great (see Figure 2). According to the survey, 30% of the teachers acknowledged that ineffective district policies and insufficient professional development are reasons for the struggles to achieving students' academic excellence. Also, the survey identified that 30% of the teachers are in agreement that there is a need for improved programs and services for the at-risk students, as dictated by the Title I legislation. The lack of community resources and competitive salaries are other barriers identified by teachers (30%) that hamper their responsibility to improve students' performance.

There are additional barriers that the respondents deem detrimental to improving students' performance (see Figure 2). School leadership is a most important priority. Since there is a focus on school test results, it is essential to consider the role of the school leader. Twenty-three percent of the teachers agreed that there is a lack of school leadership in their district. Moreover, the teachers (23%) acknowledged that there is a need for additional materials and equipment to improve the education process as well as a need for more special instructional programs (20%). Poor building facilities or maintenance present a concern for 20% of the respondents. Less than half of the teachers (20%) perceived that there is a need for more experienced teachers to make a greater impact on students' achievement. A modicum of teachers (3%) responded "other" and unsure of the barriers and challenges of achieving student performance.



*Figure 2* Teacher perception of the barriers/challenges of achieving student performance

### **Resource Strategies to Improve Student Performance**

While it may seem to be the ultimate challenge, teachers play a major role in creating a positive learning environment for students. When the appropriate resource strategies are implemented, teachers can accomplish remarkable feats, thus improving the performance of their students. According to the teacher survey results about resources

strategies implemented over the past five years (see Table 6), 88.2% saw reduced class sizes in school and only 17.7% saw a reduction district-wide. Reduced class loads was implemented in the schools and acknowledged by 84.6% of the teachers while 23.1% perceived a reduction district-wide. Another strategy implemented to improve student performance is the increased access to computer technology. Eighty-five percent replied that increased computer access was implemented in school, and more than half (66.7%) saw it district-wide. Furthermore, 89.5% of teachers concurred that programs and services for the at-risk students has been implemented in school, and 31.6% agreed that these programs are put into practice district-wide.

The Improvement District Survey for Teachers included a wealth of resource strategies to gain feedback about the implementation of resource strategies to improve student performance. Offering different resource strategies in conjunction with educational standards, can keep the class motivated while fostering students' success in the classroom. Results from the survey (see Table 6) confirmed that a large majority (94.4%) of the respondents agreed that more special instructional programs have been implemented in school, and 33.3% saw an increase district-wide. Most importantly, 87.5% of the respondents perceived that there are more experienced educators with higher degrees in school, while 37.5% saw an increase district-wide. The respondents even acknowledged the larger number of classroom aides at school (83.3%), and a small majority (33.3%) concurred the increase was district-wide. Moreover, the respondents (90.5%) agreed that there is a sufficient amount of educational materials/equipment in school, and 38.1% could confirm the increase district-wide.

Other critical areas were identified by teachers responding to the survey. The amount of professional development continues to be debated by educators and administrators. Eighty-two percent surveyed (see Table 6) indicated that sufficient professional development is provided in school and 64.6% agreed improvement was made district-wide. The need to improve facilities/maintenance is an ongoing concern. Seventy-seven percent of teachers concurred that improvements were made in school and 38.5% confirmed it throughout the district. Furthermore, one teacher responded "other" in regards to a specific resource strategy. Finally, three teachers were unsure if any resource strategies were implemented in school, and only one teacher could make a confirmation district-wide.

Table 6

*Teacher Perception of Resource Strategies to Improve Student Performance*

<u>Resource strategies</u>	<u>Percent reporting</u>	
	<u>School</u>	<u>District</u>
Reduced class sizes	88.2%	17.7%
Reduced class loads	84.6%	23.1%
Increased access to computer technology	85.2%	66.7%
Increased planning time for teachers	83.3%	25%
Improved programs and services for at-risks students	89.5%	31.6%
Increased special instructional programs	94.4%	33.3%
Increased the number of teachers with more experience/higher degrees	87.5%	37.5%
Increased use of classroom aides	83.3%	33.3%
Provided needed school materials or equipment	90.5%	38.1%
Provided more professional development for teachers	81.8%	63.6%
Improved building facilities or maintenance	76.9%	38.5%
Other	100%	0%
Unsure	100%	33.3%

### **Factors That Influence the Allocation of District Resources**

Funding education should be done wisely in order to improve the success of students. Funding practices should ensure that all students have access to high quality educational opportunities to prepare them for college and life. When asked about the factors that influence the allocation of district resources (see Table 7), nearly all (96.4%) agreed that school characteristics can influence how a district allocates resources and a small amount (3.6%) perceived very little influence. A large number of teachers (84%) replied that the school type has an influence on the allocation of resources while 16% identified a only a small influence. In addition, 80.8% of teachers indicated that student needs, a primary factor, can influence how a district allocates resources whereas 19.2% of the teachers surveyed felt the influence was slight.

The teachers acknowledged additional factors that influence how a district allocates resources. Staffing needs is a vital factor that influences the allocation of district resources. A school district should be well-informed about the ways to organize a staff to foster student achievement. Seventy-five percent of the respondents acknowledged that staffing needs have an influence on resource allocation (see Table 7) and 25% saw a very little influence. Laws and regulations are other important factor for students' success. Additionally, districts are obligated to follow laws, rules, and regulations from the federal, state, and local governments. Teachers' responses on the survey about the influence of laws and regulations (see Table 7) indicated that 84% of teachers concurred that there is an influence and 16% saw very little. Moreover, a large majority of teachers (91.7%) agreed that district goals and priorities influence how a district allocates

resources. On the contrary, a small percentage of teachers (8.3%) believed that districts goal and priorities have a very small influence.

The results of the teacher survey gave emphasis to even more factors that influence how a district allocates resources. Fairness and equity are other factors identified by 60.9% of the teachers as dictated by the historic Abbott verses Burke (1985) decision (see Table 7). Less than half of the teachers (30.4%) perceived some influence while a mere 8.7% saw no influence at all. The availability or lack of funds (another factor) to improve the student performance continues to be debated by educators. Nearly all the teachers (84.6%) concurred that availability or lack of funds had an influence on the allocation of district resources. Eleven percent saw very little, and 3.9% saw absolutely no influence. Finally, half of the teachers (50%) surveyed responded "other" as an influencing factor. Thirty-three percent identified very little influence, and 16.7% confirmed that no factors influence how a district allocates resources.

Table 7

*Teacher Perception of the Factors that Influence the Allocation of District Resources*

Influencing factors	Great extent	Percent reporting		
		Some extent	Very little	Not at all
School characteristics	28.6%	67.9%	3.6%	0%
School type	20%	64%	16%	0%
Student needs	11.6%	69.2%	19.2%	0%
Staffing needs	12.5%	62.5%	25%	0%
Laws and regulations	28%	56%	16%	0%
District goals/priorities	20.8%	70.8%	8.3%	0%
Fairness/equity	17.4%	43.5%	30.4%	8.7%
Availability/lack of funds	15.4%	69.2%	11.5%	3.9%
Other	0%	50%	33.3%	16.7%

\*Combined totals for Great/Some extent  
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### **District and School Allocation Practices**

District and school administrators are responsible for making decisions about how to distribute fiscal resources effectively. The primary focus of resource allocation practices is to concentrate on eliminating any inequities in order to close the achievement gap between the advantaged and disadvantaged students. With reference to the Improvement District Survey, the teachers were asked specific statements about whether they agree or disagree with resource allocation practices (see Table 8). When asked about whether allocation decisions are aligned with school needs, 66.7% of the teachers concurred and 33.3% saw no alignment. Also, the teachers confirmed by a large margin (76.7%) that their district engages/attempts innovative practices to improve student achievement while fewer teachers (23.3%) did not agree. Most importantly, 46.7% of the teachers replied that their district has new ways to allocate existing resources to improve student performance and 53.3% indicated that no new ways were put into practice. As a final point, 44.8% of the teachers replied that the district evaluates spending practices in order to make better spending decisions and large number of teachers (55.2%) differed in that view.

The survey revealed other observations by the respondents about resource allocation practices. According to the survey results (see Table 8), nearly all (96.6%) of the respondents agreed that the instructional staff engages/attempts in innovative practices to improve student achievement and a mere 3.5% disagreed with the consensus. Also, when the respondents were asked about available funds for resources in the past five years, 83.3% of the respondents indicated that funds were available to improve

student performance and 16.7% of the respondents could not reach that agreement. In addition, 80% of the respondents confirmed the new ways resources were allocated in school and 20% of the respondents could not support the majority. Lastly, when the respondents were asked if the instructional staff used data to determine resource needs, a large number of respondents (90.6%) agreed and a small number of respondents (9.4%) disagreed that the strategy was used.

Table 8

*Teacher Perception of District and School Allocation Practices*

	<u>Agree strongly</u>	<u>Agree somewhat</u>	<u>Disagree strongly</u>	<u>Disagree somewhat</u>
<u>Practices</u>	<u>Percent reporting</u>			
District resource allocation decisions are aligned with school needs	13.3%	53.3%	16.7%	16.7%
District often engages or attempts innovative practices to improve student performance	16.7%	60%	10%	13.3%
District find new ways to allocate existing resources to improve student performance	10%	36.7%	30%	23.3%
District evaluates spending practices to make better decisions	3.4%	41.3%	44.8%	10.3%
Instructional staff at school often engages/attempts innovative practices to improve student achievement	37.9%	58.6%	3.4%	0%
For the past five years, funds for resources have been available to the school to improve student achievement	23.3%	60%	6.7%	10%
School finds new ways to allocate existing resources to improve student performance	36.7%	43.3%	10%	10%
Instructional staff at school use data to determine resource needs that will improve student performance	34.4%	56.3%	3.1%	6.3%

*\*Combined to totals for Agree/Disagree  
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### Summary

The purpose of this study was to determine whether a significant relationship exists between the allocation of fiscal resources and student achievement as measured by test scores. The primary research question was addressed through the use of a correlation and multiple linear analyses. District test results for grades 6, 7, and 8 in language arts and mathematics from the 2011-2012 school year were utilized. An actual blended expenditure budget for the fiscal year ending in 2012 was reviewed for seventeen schools

in the New Jersey district. A quantitative analysis was performed on the Improvement District Survey results to test for significant differences in the perception of teachers about resource allocation and student achievement.

Two sets of analyses were performed to address the research question. In first set, the NJASK language arts and mathematics performance results (dependent variable) were compared to independent variables: salaries for teachers, government-wide school based expenditures, educational media services/school library, other purchased services, and general supplies. Results of the correlation and linear regression analysis indicated that there is no significant relationship between the allocation of fiscal resources and student achievement.

In the second set, the survey data was uploaded into one Excel spreadsheet for and prepared for quantitative analysis. A descriptive statistical analysis was performed on the survey to categorize common themes expressed by respondents in one district. According to Creswell (2008) a quantitative-based study is a common approach because it promotes an understanding of perceptions, social trends, and attitudes of a sample population. Also, a quantitative research survey questionnaire can be used identify and evaluate valid findings (Creswell, 2008). Results of the survey analysis indicated that a large number of teachers concurred that students' academic performance has improved and financial resources have increased in the past five years.

## Section 5: Discussion, Conclusions, and Recommendations

### **Introduction**

In Section 5, I present the conclusions of this study. The divisions of this section include: summary of research purpose and methodology, research question and hypotheses, and interpretation of the research findings with connections to the review of literature. In the closing sections, I will discuss the implications for social change, implications for action, recommendations for further study, and summary.

### **Summary of Research Purpose and Methodology**

The federal NCLB legislation holds schools accountable for improving students' academic achievement regardless of their socioeconomic backgrounds and/or minority background. The task of meeting the 2014 proficiency deadline frustrated many school leaders and educators. Even with the funding of Title I, the gap between the economically advantaged and disadvantaged students continues to increase (Hanushek & Lindseth, 2009). The various efforts to improve the level of student progress have generated spirited debates concerning how to accomplish this objective, which centers around the relationship between funding and student achievement.

Most Americans believe that increasing school funding will lead to improved student achievement (Hanushek & Lindseth, 2009). In this study, I reviewed a number of studies from published authors, educational journals, and prior studies that have addressed the relationship between funding and student achievement. These studies reported conflicting results, with some finding no significant relationship between funding and student achievement, while others found a significant relationship.

Cubberley (1906) was the first scholar to develop the concept of equalization education funding for schools. He revealed the problems with local financing of public education and requested state assistance. Cubberley pointed out that states often believe that increasing funding for schools is needed but are unsure of how to distribute them to achieve the best results. Using statistical and quantitative methods, Cubberley collected an enormous amount of data pertaining to state school funding and made a definite conclusion. He found that "what is a very slight effort for one community can be an average load for another and an excessive burden for a third" (p.201). Cubberley's research led to large effort to compile additional evidence about the funding of education.

A number of other studies were conducted that found no significant relationship between fiscal spending and achievement. Among these were Contreras (2010), Bryant (2010), Green et al. (2008), O'Malley et al. (2012), and Turley (2009). After an extensive review of research data on student achievement, Hanushek and Lindseth (2009) concurred that there is no correlation between funding and student achievement. Hanushek and Lindseth have been important participants in the school funding debate for 3 decades.

Not all studies of the relationship between funding and achievement came to the conclusion that there is no correlation between funding and student achievement. Other studies reviewed as a part of this study found a positive relationship between funding and student achievement. Among these were Lips et al. (2008), Krumpe (2012), and Arrington (2012). Lips, and Krumpe confirmed that a positive relationship exists

between funding and spending if money is spent effectively. Results of Arrington's study merely stated a significant positive correlation.

I also reviewed two major court cases regarding the financing of public education. *Abbott versus Burke* (1985), a historic case considered the most renowned and a significant litigation for minority and poor students. The lawsuit was filed in 1981 by ELC. The Supreme Court ruled that to satisfy the Constitution, the state must ensure urban children an education enabling them to compete with their suburban peers. Additionally, ELC filed a motion in 2010 on the behalf of the Abbott Plaintiffs with the New Jersey Supreme Court. The 2-week trial revealed that the *Abbott XX* formula was underfunded by 1.6 billion. The New Jersey Supreme Court ruled that there is significant harm to at-risk students across the districts because the SFRA was not fully funded. Both cases point out the disparities in the allocation of funding for wealthy and poor districts.

### **Research Question and Hypotheses**

The population used for this study was sixth, seventh, and eighth grade students in a New Jersey district. The total 2011-2012 enrollment for the district was 5,387. There were 1,852 students in Grade 6, 1,850 in Grade 7, and 1,685 in Grade 8. The Abbott district participates in the free and reduced lunch program and receives Title I funding. NJASK test results from all seventeen schools were included in the study. The schools were comprised of 4 middle and 13 grammar schools.

In the study, I focused on student performance as measured by the NJASK test results in the areas of language arts and mathematics during the 2011-2012 school year.

Two sets of analyses were conducted to address the following research question and hypotheses:

1. Is there a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores?

$H_0$ 1: There is no significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

$H_a$ 1: There is a significant relationship between the allocation of fiscal resources and student achievement as measured by test scores.

The research question was addressed through two sets of analyses. In the first set, a correlation analysis on the language arts and mathematics grade level data, was studied to see how related the dependent variable NJASK test scores (percentage correct) is to the five expenditure variables. A multiple linear regression analysis on the expenditure variables was also conducted to determine whether the relationships between the variables were statistically significant. In the second set, a descriptive statistical analysis was performed on the Improvement District Survey results to categorize common themes expressed by teachers in one district.

### **Interpretation of Findings**

Results of the study suggest that there is no significant relationship between the allocation of fiscal resources and student achievement as measured by language arts and mathematics test scores. There is no statistically significant relationship between funding and the spending categories: salaries for teachers, government-wide school based expenditures, educational media services/school library, other purchased services, and

general supplies. Conversely, there is a significant mathematics relationship and approximately 25% of the variation in the dependent variable (mathematics achievement) is accounted for by the independent variable (educational media services/school library). The findings of this study supports the conclusions of Contreras (2010), Bryant (2010), Green et al. (2008), O'Malley et al. (2012), Turley (2009), and Hanushek et al. (2009) that increased expenditures are not associated with higher academic achievement. Moreover, this study lends credence to the conclusions reached by opponents of education reform.

The New Jersey district used an array of effective resource strategies to improve student performance at the school and district level for the past 5 years. The Improvement District Survey results revealed that the district is capable of aligning their improvement efforts with the barriers and challenges of teachers by implementing the following strategies: reducing class sizes/loads, increasing access to computer technology, increasing planning time for teachers, increasing the number of experienced teachers, improving instructional programs and services for at-risk students, and increasing special instructional programs. Furthermore, the teachers identified district goals/priorities and school characteristics as major factors that influence how a district allocates resources. While the teachers agreed to the improvements being made in their schools, more than half disagreed that the district finds new ways to allocate existing resources to improve student achievement and evaluate spending practices to make better spending decisions. Furthermore, the results suggest that some of the teachers were uncertain if a resource allocation practice/strategy was implemented district-wide.

### **Changes in the No Child Left Behind Legislation**

The U.S. Department of Education granted New Jersey a waiver from some of the provisions of NCLB (renewed yearly). The state no longer has to meet the performance targets. The requirement was that all students would demonstrate proficiency in all subjects (NJEA, 2013). In return for the waiver, New Jersey has to set new performance targets for improving students' achievement and closing the achievement gap as well as implementing college-ready standards. Furthermore, the New Jersey district needs to create comprehensive systems of teacher and principal development, evaluation, principal observation, peer review, student work, and parent feedback (NJEA, 2013).

### **Implications for Social Change**

The NCLB (2001) legislation and the demands of accountability by state and federal mandates have expedited efforts to close the achievement gap. This study provides research data that involves social change through the efforts of district, school administrators, teachers, and policy makers in providing a quality education for students regardless of their socioeconomic backgrounds and/or minority background.

The common denominator in the increase of innovative practices/strategies is teachers making learning connections with students. Even with a fully funded instructional program, dedicated and capable educators are essential to the program's success. The first step to social change is being aware of the critical issues facing public education and working together to find solutions. Moreover, it is imperative that students participate in the struggle to create a more equitable society. Furthermore, it is the

responsibility of educators to help prepare their students to become active citizens in a democratic society.

Educators who engage and inspire students with adequate funding will most likely achieve greater academic success. Only when funding and educational practices are successfully combined, will the achievement gap begin to close. With a closed achievement gap, it is likely that the economically disadvantaged students will graduate from high school, obtain a college degree or earn a middle-class living. This study adds to the information for improving the allocation of fiscal resources to support increased student achievement and the current research of allocation patterns and student performance.

### **Implications for Action**

District, school administrators, teachers, and policy-makers should be concerned with the results of this study and of previous studies that questioned whether fiscal funding relates to student success. Although debates on the issue of funding education have offered no immediate resolution, a well-informed argument is a healthy way to proceed in the direction of change. Given that the resource allocation budget to the State Department of Education is limited, state administrators should target areas that prove beneficial to students' learning and reallocate the limited aid to other areas if needed. Additionally, the New Jersey district needs to continue on their chartered course in pursuit of academic excellence through identifying specific goals, objectives, and resource strategies that will fulfill their mission and mandate. As a final point, surveying the teachers provided this study with an important source of information about the quality

of teaching and resource allocation practices. Teacher input was valuable to this study because teachers have a direct influence on student performance and should be part of the decision-making process concerning how to use fiscal resources effectively to improve students' outcomes.

### **Recommendations for Further Study**

The purpose of this study was to determine whether a significant relationship exists between the allocation of fiscal resources and student achievement as measured by test scores. More specifically, I sought to determine if increased spending on the expenditure variables: salaries for teachers, government-wide school based expenditures, educational media services/school library, other purchased services, and general supplies can improve student performance. The findings do not show a correlation between the expenditure variables and NJASK achievement variable. Thus, further research is necessary to determine which expenditure variables or combination of variables do have an effect students' success on the NJASK test.

Conducting this study in other districts may not provide conclusions to support the findings of this study. The study should be conducted in other districts that provide considerably more fiscal expenditures and districts that provide considerably less fiscal expenditures in order to determine whether increased funding is solution for increasing student achievement. A longitudinal study is suggested to determine whether test scores improve if increases to expenditures are made over a period of time.

### **Summary**

In this section, I presented the findings of the study related to the research question and hypotheses. Future research recommendations were made. The conclusions drawn about the significance and the implications of the findings for specific spending variables were analyzed in this study. Although no correlation was found between the independent and dependent variables in this study, it can be assumed that other independent variables might result in higher student achievement when measured by the same dependent variable. Therefore, further studies are needed to determine which variables may contribute to the improvement of the test score results. This study is important to the field of education because schools and districts are often criticized for not making acceptable gains in closing the achievement gap and blame inadequate levels of funding.

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*Student Performance and How They Don't. A Policy Information Perspective.*

## Appendix A: District Statement of Consent



Office of the Superintendent

PUBLIC SCHOOLS  
New Jersey



Chief of Staff

May 19, 2014

Jo Ann Neal

Dear Ms. Neal:

We have reviewed your application to conduct "Examination of Resource Allocation on Student Achievement" in Public Schools. Your project entails anonymously surveying 2000 teachers in our district through an online survey.

You may conduct this research in our schools contingent upon obtaining IRB approval from your sponsoring institution. You may begin your research as soon as this office receives that documentation. If you must submit permission from the District as part of that review process, this letter indicates the District's permission. If your study is exempt from IRB review, you must submit documentation from the IRB confirming the exemption.

When you submit IRB Approval from your institution, please include a copy of this letter as well. You may submit this approval electronically sending the needed documents to

Sincerely,

Chief of Staff  
Public Schools

PUBLIC SCHOOLS – AN EQUAL OPPORTUNITY EMPLOYER

## Appendix B: Improvement District Survey

## Improvement District Survey

From Examination of Resource Allocation: Connecting Spending to Student Performance, "Appendix B: Data Collection Protocols and Procedures, Teacher Survey/Improvement District Survey," pp. 149-152. Copyright © 2003 by SEDL. Adapted by Jo Ann Neal with permission from SEDL. Available from <http://www.sedl.org/pubs/policyresearch/policydocs/Appendix-B.pdf>

**1. Which of the following best describes your relationship to your public school?**

- Teacher
   
  Curriculum Specialist  
 Teacher's Aide
   
  Other

**2. How long have you held this position in this school or any other?**

- First year
   
  Five to ten years  
 Two to four years
   
  More than ten years

**3. Which of the following characteristics best describe your school? (Please check all that apply.)**

- |  |  |
|--|--|
| <input type="checkbox"/> Rural                           | <input type="checkbox"/> High percentage of minority students                      |
| <input type="checkbox"/> Urban                           | <input type="checkbox"/> High percentage of students with limited English language |
| <input type="checkbox"/> Suburban                        | <input type="checkbox"/> High student mobility                                     |
| <input type="checkbox"/> High poverty student population | <input type="checkbox"/> Other   |

**4. How much improvement in student performance has your school made in the last five years?**

- |  |  |
|--|--|
| <input type="radio"/> Much improvement for all students  | <input type="radio"/> Some improvement for some students |
| <input type="radio"/> Much improvement for some students | <input type="radio"/> No improvement                     |
| <input type="radio"/> Some improvement for all students  | <input type="radio"/> Unsure                             |

### Improvement District Survey

**5. Under the column labeled "School", place a check next to any resource strategy your school has implemented over the past five years to improve student performance. If the strategy has also been implemented district-wide, please place a check in the column labeled "District." (Please check all that apply; you may have a check for a strategy in both the school and district columns.)**

	School	District
a. Reduced class sizes	<input type="checkbox"/>	<input type="checkbox"/>
b. Reduced class loads	<input type="checkbox"/>	<input type="checkbox"/>
c. Increased access to computer technology	<input type="checkbox"/>	<input type="checkbox"/>
d. Increased planning time for teachers	<input type="checkbox"/>	<input type="checkbox"/>
e. Improved programs and services for at-risk students (special ed., ELL, dropout, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
f. Increased special instructional programs (such as reading, mentoring/tutoring, English language)	<input type="checkbox"/>	<input type="checkbox"/>
g. Increased the number of teachers with more experience or higher degrees	<input type="checkbox"/>	<input type="checkbox"/>
h. Increased use of classroom aides	<input type="checkbox"/>	<input type="checkbox"/>
i. Provided needed school materials or equipment	<input type="checkbox"/>	<input type="checkbox"/>
j. Provided more professional development for teachers	<input type="checkbox"/>	<input type="checkbox"/>
k. Improved building facilities or maintenance	<input type="checkbox"/>	<input type="checkbox"/>
l. Other	<input type="checkbox"/>	<input type="checkbox"/>
m. Unsure	<input type="checkbox"/>	<input type="checkbox"/>

### Improvement District Survey

**6. In your opinion, what barriers and challenges have been obstacles to achieving student performance improvements at your school during the last five years? (Please check all that apply.)**

- |  |   |
|--|---|
| <input type="checkbox"/> a. Large class sizes  | <input type="checkbox"/> j. Large class loads                       |
| <input type="checkbox"/> b. Limited access to student data   | <input type="checkbox"/> k. Limited planning time for teachers      |
| <input type="checkbox"/> c. Limited access to computer technology  | <input type="checkbox"/> l. Lack of experienced teachers            |
| <input type="checkbox"/> d. Limited school material or equipment   | <input type="checkbox"/> m. Lack of community resources             |
| <input type="checkbox"/> e. Poor building facilities or maintenance  | <input type="checkbox"/> n. Lack of leadership at the school level  |
| <input type="checkbox"/> f. Ineffective district policies or mandates  | <input type="checkbox"/> o. Ineffective state policies and mandates |
| <input type="checkbox"/> g. Insufficient professional development  | <input type="checkbox"/> p. Lack of competitive salaries            |
| <input type="checkbox"/> h. Insufficient programs and services for at-risk students (special ed., ESL, dropout, etc.)      | <input type="checkbox"/> q. Other                                   |
| <input type="checkbox"/> i. Lack of special instructional programs (such as reading, mentoring/tutoring, English language) | <input type="checkbox"/> r. Unsure                                  |

**7. Which of the following factors influence how your district allocates resources (funds, people, programs, facilities) to schools? Check the label that represents your choice. (If you cannot respond to an item, please leave it blank.)**

	To a great extent	To some extent	Very little	Not at all
a. School characteristics (location, population, #of students, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. School type (elementary, middle, high, alternative, magnet, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Student needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Staffing needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Laws and regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. District goals and priorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Fairness and equity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Availability or lack of funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Improvement District Survey

**8. Read the following statements and check whether you agree or disagree (If you cannot respond to an item, please leave it blank).**

	Agree Strongly	Agree Somewhat	Disagree Strongly	Disagree Somewhat
a. District resource allocation decisions are aligned with the needs of my school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. My district often engages in or attempts innovative practices to improve student performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. My district finds new ways to allocate existing resources to improve student performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. My district evaluates spending practices to make better spending decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Instructional staff at my school often engage in or attempt innovative practices to improve student achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. In the past five years funds for resources have been available to my school to improve student performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. My school finds new ways to allocate existing resources to improve student performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Instructional staff at my school use data to determine resource needs that will improve student performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for participating in my research. Copyright © 2003 by SEDL

## Appendix C: Survey Consent Agreement



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Date: July 17, 2013

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Thank you, again, for your interest in using **Teacher Survey/Improvement District Survey** published in Appendix B: Data Collection Protocols and Procedures on pages 149-152 from the SEDL publication *Examination of Resource Allocation: Connecting Spending to Student Performance*.

Sincerely,

\_\_\_\_\_  
SEDL

*July 18, 2013*  
Date signed

Agreed and accepted:

Signature: *Jo Ann Neal* \_\_\_\_\_  
Date signed: *7/17/13* \_\_\_\_\_

Printed name: *Jo Ann Neal* \_\_\_\_\_

## Appendix D: Walden Study Statement of Consent

### Examination of Resource Allocation and Student Achievement

You are invited to take part in a research study that will examine resource allocation and student achievement. Resource allocation means how funds, personnel, programs, and facilities are expended to meet school and district needs. You have been identified as an individual who meets the criteria for my research. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Jo Ann Neal, who is a Doctor of Education candidate at Walden University. You may already know her as a teacher in the New Jersey district, but this study is separate from that role. The researcher is working with the support of Dr. Dannett Babb, Doctoral Committee Chairperson.

#### Background Information:

Despite the raise in per-pupil expenditures, the achievement gap between the economically advantaged and disadvantaged students (lack the skills necessary to thrive in the 21st century) continues to increase. The purpose of this study is to compare language arts and mathematics scores of grades 6, 7, and 8 to discern if instructional expenditures benefit student performance.

If you agree to be in this study, you will be asked to complete an online survey. The data will be downloaded from the server and analyzed myself. The survey will take approximately 10 minutes. You will be given a 3-week period to respond to the survey. If you decide to participate in the survey, you will be asked about the type of performance gains achieved by your district, resource allocation efforts directed toward improving student performance, barriers and challenges your district may have faced in allocating resources, and resource allocation practices you consider effective.

Participation in this study is voluntary, and no compensation will be paid. Being in this study would not pose a risk to your safety. However, taking the survey may cause some stress. I will respect your decision of whether or not you choose to be in the study. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

The potential benefits would be providing district, school administrators, and policy makers information for improving the allocation of fiscal resources to support increased student achievement, and adding to the current research addressing the link between allocation patterns and student performance.

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secure by storing it on a password protected laptop computer and backed up on a password protected USB drive. The electronic data will be kept in a locked file cabinet in my home. As requested by Walden University, the data will be kept for a period of at least 5 years.

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email [joann.neal@waldenu.edu](mailto:joann.neal@waldenu.edu). If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 3121210. Walden University's approval number for this study is 03-17-15-0033678 and it expires on March 16, 2016.

I will provide you with a copy of this consent form for your records.

#### Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below and returning a completed survey, I understand that I am agreeing to the terms described above.

Printed Name of Participant \_\_\_\_\_

Date of consent \_\_\_\_\_

Participant's Signature \_\_\_\_\_

Researcher's Signature \_\_\_\_\_



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## Appendix E: Improvement District Survey E-mail Notification

Dear Educator,

I am writing to let you know about an important survey about resource allocation and student achievement. This *Improvement District Survey* will provide, district, school administrators, and policy makers information for improving the allocation of fiscal resources to support increased student achievement.

You have been identified as an individual who meets the criteria for my research. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Jo Ann Neal, who is a Doctor of Education candidate at Walden University. You may already know her as a teacher in the New Jersey district, but this study is separate from that role.

Next week, you will receive a Study Statement Consent Form posted on the web as an opening survey page. You can click on the "Go to survey link" expressing your consent to participate in the study and complete the survey. As a measure to ensure anonymity, you will be asked not to provide any personal identifying information.

Thank you in advance for your participation in this study.

Sincerely

Jo Ann Neal