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## The Impact of After School Learning Centers on Low Achieving African American Elementary Students

Jorja Lockhart Scott

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THE IMPACT OF AFTER SCHOOL LEARNING CENTERS ON LOW ACHIEVING  
AFRICAN AMERICAN ELEMENTARY STUDENTS

by

JORJA LOCKHART SCOTT

(Under the Direction of Charles A. Reavis)

ABSTRACT

The purpose of this study was to determine the impact of after school learning centers in a rural school district in South Carolina on Measures of Academic Progress achievement scores for low achieving African American elementary students. The researcher collected and analyzed Palmetto Achievement Challenge Test data administered in the Spring of 2008 from the state database and identified 419 African American low achieving fourth and fifth grade students for the study.

The Educational Accountability Act of South Carolina requires that schools develop individual academic plans and provide remediation for students in grades three through eight who score Below Basic on the state mandated test. After school programs are one avenue by which these needs are being met. Students were categorized into three groups: students attending after school programs with an academic focus; students attending after school programs with academics plus a recreational component; and students not participating in an after school program. Grade percentile ranking scores were collected from the local school database for Cognitive Abilities Test Composite score and Measures of Academic Progress Reading and Math Fall 2008 and Spring 2009 test administration. Students' names were used only during the database query and sorting process. After sorting, names were removed and replaced with random identification numbers to protect student anonymity.

The results showed that the cognitive abilities scores were significantly related to the Measures of Academic Progress Reading scores but after controlling for cognitive abilities there were no significant differences among the three student groupings found in the reading achievement. There were significant differences among the three student groupings found on the math achievement; however, the cognitive abilities scores were not significantly related to the Measures of Academic Progress Math scores.

Implications include a need for examining the after school programs to determine what changes could be made in the reading program to make a positive impact on student achievement. Additionally, more research and data collection could help school administrators be better informed of their after school programs and assist in better serving children in their schools.

**INDEX WORDS:** After school programs, low achieving students, African American, rural, mandates, District, School, South Carolina, Dissertation

THE IMPACT OF AFTER SCHOOL LEARNING CENTERS ON LOW ACHIEVING  
AFRICAN AMERICAN ELEMENTARY STUDENTS

by

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A Dissertation Submitted to the Graduate Faculty  
of Georgia Southern University in Partial Fulfillment  
of the Requirements for the Degree

DOCTOR OF EDUCATION

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## DEDICATION

I dedicate this dissertation, to my parents, Chilton K. Lockhart and Paitsel H. Lockhart, public school educators, who have instilled the love for learning and education throughout my life.

Secondly, I dedicate this dissertation to my paternal grandmother, Florence E. Lockhart, who gave me unconditional love, taught me about perseverance, the love of reading, spirituality and the many lessons of life and the beauty of nature, all of which I will never forget.

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## CHAPTER 1

### INTRODUCTION

The Clinton Administration's Improving America's Schools Act of 1994 reauthorized the Elementary and Secondary Education Act. Under this law, after school activities were provided through the 21<sup>st</sup> Century Community Learning Center Program and Title I. Inclusive in this law was a statutory requirement encouraging schools that received funding to enhance instruction through programs such as extended school year, before and after school programs, and summer programs. For example, Title I, which was funded by the Improving America's Schools Act, provided extra help with basic and advanced skills to disadvantaged elementary and secondary students in an after school setting. Under this same law, the 21<sup>st</sup> Century Community Learning Center program was developed.

#### History of After School Programs

Changes in child labor laws and the structure of working class families led to the emergence of after school programs in the late 1800s. Children's roles gradually changed from their being workers to being students. With parents at work and less supervision at home, children had more discretionary time and became more vulnerable to the draw of the streets. These factors led to an increase in risky behaviors and illegal activity. Halpern (2002), cites a report by Goodman (1979) and Nasaw (1979) which indicated that authorities responded by passing curfews and other street laws prohibiting fire setting, begging, roaming-around, loitering, blocking sidewalks, and playing street games. Others viewed the free time as an opportunity to improve society by providing safe constructive areas for children away from the harmful effects of the streets. Halpern (2002), drawing from The Boys' Club of New York (Zane, 1990), uses the example of businessman Edward Harriman who opened a boys' club in 1876 with a membership of seven

boys housed in a building located at Tompkins Square in Manhattan. Within 14 years, the club membership grew to over 400 participants. Not only did membership increase, but physical space and program offerings increased as well. The programs ranged from wrestling and natural history clubs to a fife, drum, and bugle corps. This program paved the way for the formation of organizations which included girls and specific ethnic immigrant groups.

Approximately a hundred years later the issue of providing after school programs for students in need continues. The current focus has shifted to academic achievement for low achieving students, and according to Halpern (2002), the needs of African American and Latino children and their families.

#### After School Programs in the 1990s

To ensure all Americans had educational opportunities, President Clinton and Vice President Gore made a commitment to improve education and the workplace. Under their leadership, the 21<sup>st</sup> Century Community Learning Centers flourished. The program grew from a \$1 million demonstration program in 1997 to a \$453 million initiative in 2000. As noted in the Federal Register, Volume 62, Number 231, “The 21<sup>st</sup> Century Community Learning Centers Program was established by Congress to award grants to rural and inner-city public schools, or consortia of those schools, to enable them to plan, implement, or expand projects that benefit the educational, health, social services, cultural and recreational needs of the community.

School-based community learning centers can provide a safe, drug-free, supervised and cost-effective after school, weekend or summer haven for children, youth and their families” (p. 63777). Only rural or inner-city public elementary or secondary schools, consortia of those schools, or Local Education Agencies (LEA) applying on their behalf, were eligible to receive the grant.

To assist schools and centers in developing the after school programs, in May 1997, First Lady Hillary R. Clinton, released a guide “Keeping Schools Open as Community Learning Centers: Extending Learning in a Safe Drug Free Environment Before and After School”. Partners in writing this step-by-step guidebook were The Department of Education, The National Community Education Association, Policy Studies Associates, and the American Bar Association. The guide detailed the steps necessary to begin a community learning center and a list of resources to assist in the start up. The guide also included suggestions for estimating costs of obtaining a qualified staff to evaluate the success of the programs. In awarding the grants, Secretary of Education, Richard Riley, assured there would be equitable distribution of assistance among the States, among urban and rural areas of a State, and among urban and rural areas of the United States. (Department of Education, 1997)

Grantees were required to carry out at least four of the activities listed in section 10905 of the ESEA (20 USC 8245) such as: literacy education programs; children’s day care services; integrated education, health, social service, recreational or cultural programs; expanded library service hours to serve community needs; telecommunications and technology education programs for individuals of all ages; and parenting skills education programs. Applicants could have proposed an array of inclusive and supervised services that included extended learning opportunities (such as instructional enrichment programs, tutoring, or homework assistance), but could also have included recreational, musical and artistic activities.

Further, rural and heavily populated minority communities were designated as empowerment zones or enterprise communities by the United States Housing and Urban Development (HUD) and the United States Department of Agriculture. “A special concern of the federal government for more than three decades has been the education of children who come to

school with disadvantages-be they educational, economic, physical, or mental,” (Jennings, 2000, p. 516). Implementing community learning centers in these recognized areas would ensure programs that would focus on helping children in high-need schools and narrowing the achievement gap for children.

Over 3,600 schools in over 900 communities across the country were successful in receiving the grants and provided extended learning opportunities to over 650,000 students during after school hours. President Clinton had requested one billion dollars in the fiscal year of 2001 to be set aside for continuation and expansion of the 21<sup>st</sup> Century Community Learning Centers; however, a new Congress and President were assuming power.

#### The No Child Left Behind Act of 2001

Three days after taking office in January 2001, President George W. Bush announced No Child Left Behind (NCLB), his reform of the Elementary and Secondary Education Act (ESEA) of 1965. This law made several significant changes to the 21<sup>st</sup> CCLC program and was reauthorized under Title IV, Part B, of the ESEA. President Bush recommended a 40% cut in funding (from one billion to six hundred million) and a change for applicants to the program from applying for federal competitive grants to formula grants at the state level. The new statute provided additional state and local flexibility in deciding how the funding could be used to support higher academic achievement and dramatically expanded eligibility for the 21<sup>st</sup> Century Community Learning Center grants to public and private educational and youth-serving organizations.

More specifically, the program’s authorizing statute required grantees to implement activities based on rigorous scientific research, focus services on academic enrichment opportunities, transfer program administration from the Federal to the State level, expand eligibility to

additional entities, target services to poor and low-performing schools, extend the duration of grant awards, increase accountability at the State and local levels, expand the range of locations in which local programs may take place, require funds to supplement not supplant, and allow States to require a local match. (Idaho 21<sup>st</sup> Century Community Learning Centers Guidance Packet, 2005)

Not only did the NCLB law affect the Community Learning Centers program, it placed accountability in the center of the educational system and required each state to enact a strong structure of accountability based on clear and high standards and a system of annual assessments to measure student progress against those standards (Paige, 2002).

Prior to the aforementioned requirement by the NCLB law and the implementation of the 21<sup>st</sup> Century Grant, the state of California, along with a Harvard Family Research Project, began an evaluation in 1998, on the after school program, LA's Better Educated Students for Tomorrow (LA's BEST). The program was funded at \$15 million per year through a partnership between the City of Los Angeles, the Los Angeles Unified School District, and the private sector. There were 101 elementary schools in 10 sites, serving 14,000 students. The program was developed to provide a safe environment for students after school, to integrate educational support by including educational enrichment and recreational activities, and to teach social skill building for interpersonal skills and self-esteem. The final evaluation, or impact study, was concluded in 2000. The evaluators found that "greater participation was significantly related to positive achievement on standardized tests of mathematics, reading, and language arts when the influence of gender, ethnicity, income, and language status was controlled for". (Huang, D., Gribbons, B., Kin, K.S., Lee, C., & Baker, E.L., 2000, p.16).

From the years of 1999 to 2001, the federal grantees continued to increase, as did the need for evaluations of the after school programs to substantiate the monies being awarded. Although the amount of federal funding was cut in the year 2001, at the beginning of the Bush Administration, the number of state grantees continued to grow across the nation.

#### Research on After School Programs

The first South Carolina grantees of the 1998 federal 21<sup>st</sup> Century Community Learning Center funds were four public school districts: Charleston County, Lancaster County, Sumter School District 2, Anderson District 5 and one private school, Beck Academy of Languages in Greenville, South Carolina. ([Clinton2.nara.gov/WH/News/grants1198/list4](http://Clinton2.nara.gov/WH/News/grants1198/list4))

In the 2004 school year a survey conducted by the South Carolina Department of Education identified 1,262 after school providers in South Carolina ranging from 214 sites in Richland County to 1 in rural Jasper County. ([ed.sc.gov/news/more.cfm?articleID=454](http://ed.sc.gov/news/more.cfm?articleID=454)). The need for after school care continues to grow as does the school age population in South Carolina. In a March 2005 news release from the Afterschool Alliance, data showed more than one-quarter of South Carolina children of working families continued to be unsupervised in the afternoons. Nationwide, data compiled from the groundbreaking survey, America After 3 PM, found of the 30,000 families who participated in the survey that 31% of Caucasian, 25% of African American and Hispanic, and 21% of Asian-Pacific Islander children in working families are in self care in the afternoon. A closer examination of the America After 3PM survey revealed that African American children are significantly more likely to be in after school programs than other children. There is a greater demand in the African American community than in others due to the fact that more than 25% of African American children have no adult supervision after school. The United States Census of 2000 reported that African American parents ranked lower than

their Caucasian counterparts in income and educational status which aligns with the America After 3PM reporting that African American parents relied more heavily on state or federal funded educational centers or religious organizations to assist their children with homework or remediation. According to Barton (2004), “Achievement gaps by race/ethnicity and income mirror inequalities in those aspects of schooling, early life, and home circumstances that research has linked to school achievement.” (p. 9)

Further after school research reported, in a longitudinal study by Posner and Vandell, on after school activities of 194 African American and White children from low-income households. The findings revealed the children who attended after school programs spent more time on academic and extracurricular activities, whereas children in informal care settings spent more time watching TV and hanging out. The after school programs varied from year to year; one program was sponsored by the school district and another sponsored by a local church at a neighborhood center. The final program was sponsored by a community service agency. Recreational and remedial options were offered by all three after school programs. Measure of children’s performance was obtained through report card grades from school records. The African American children who had obtained better academic grades as third graders were more likely to engage in extracurricular activities as fifth graders and were less likely to spend time in outside unstructured activities. White children who had received higher report card grades in third grade were more likely as fifth graders to engage in academic activities after school. These findings support that after school programs can provide low income children with similar activities such as music, art, dance, and academic tutoring as experienced by middle income children with positive results. Unfortunately, many children in this study lived in seriously dangerous neighborhoods. (Posner and Vandell, 1999)

The U.S. Department of Education contracted with Mathematica Policy Research, Inc., and Decision Information Resources, Inc., to begin an initial evaluation of the 21<sup>st</sup> Century Community Learning Centers program in 1999. The evaluation, *When Schools Stay Open Late*, was completed in 2003 with a follow up in 2004, and in contrast, indicated the programs did not affect reading test scores or grades for elementary students, nor did their grades in English, mathematics, science, and social studies increase. Other research, such as *When Time Matters: Examining the Impact and Distribution of Extra Instructional Time* (2002), a study of the Chicago Public Schools Lighthouse program and *The Effectiveness of Out-of-School-Time Strategies in Assisting Low-Achieving Students in Reading and Mathematics: A Research Synthesis* (2004), prepared for the Department of Education, reports a more positive influence on student achievement for those students attending an after school program. Although the Research Synthesis reviewed fifty three studies, most of the research was on programs in urban areas and with all levels of students and achievement. The researchers referred to the studies reviewed as “rated as medium in research quality because they did not adequately describe the OST intervention or its implementation”. (p. 3)

#### Statement of the Problem

With increased focus on academic progress and accountability, the importance of nationwide after school programs has been at the pinnacle of local and national education attention and political debate due to the impact on school rating and funding. This focus on academic progress also brings into national attention the gap in achievement for low income and minority children. Under the No Child Left Behind Act of 2001, schools are now, more than ever, required to put in place strong accountability systems which reflect that all students be held to the same high standards and demonstrate proficiency by the 2013-2014 school year. This Act

requires that all schools, even the poorest urban and rural schools, show academic proficiency for all students, even those among the low income and minority groups.

Educational leaders must find additional resources and revenues to better provide academic opportunities for children of low income and minority parents. The after school program model, specifically the funding that accompanies the 21<sup>st</sup> Century Community After School Learning Center and Title I monies, are avenues by which school principals can access state and federal funding to provide additional learning opportunities for those at-risk students.

While research concerning at risk students and after school programs continues to increase, there is debate over the inconsistencies in the findings of the studies involving after school programs and achievement at the elementary school level and whether the evidence supports increased investments in those programs.

With the emphasis on school report cards, making adequate yearly progress and academic plans for those students not scoring well on standardized tests, it is critical to measure the results of costly programs designed to help those students increase test scores. This study served to fill a gap in the educational research with an examination of a more rural, coastal community school district in South Carolina focusing on fourth and fifth grade low achieving African American elementary students and achievement scores. There are sixteen elementary after school programs in this school district. Some of the elementary programs added a recreational component; others served strictly as an extension of the academic school day. All after school centers in this study were required to have certified elementary teachers providing instruction in the after school program. This researcher examined the impact of a public school district's elementary after school program on the achievement scores of low achieving, African American students.

### Research Questions

This study addressed the following overarching research question: What is the impact of after school programming on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural community? Specific sub-questions guided the research:

1. After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?
2. After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

### Significance of the Study

Finding effective ways of assisting students to attain the grade level skills in reading and mathematics, as required by NCLB, is of concern for administrators and educators in public education. The extended school day programs, which include before and after school, are proving to be an option for educational leaders to meet this requirement. The findings of this study may prove to be helpful to the administrators and educators making those decisions. Also, the information from the study may be used by the educational lobbyists, policymakers, and

advocates as support for funding for Title I after school programs as well as the 21st Century After School Community Learning Centers.

While researchers have investigated after school programs, mostly in urban areas and with inconsistencies, the present study served to fill the gap in the educational literature regarding elementary achievement and after school programs in a rural area of South Carolina. The findings of this study are important because educational leaders need to determine if after school programs are a viable source for improving student academic performance, particularly with regard to low achieving African American students. Finally, the results can help with the state and county school districts to determine the effectiveness of the after school programs and assess for changes and improvements.

#### Delimitations

1. This study used a sample population from 16 elementary schools in a rural coastal geographical section of the state of South Carolina. At the time of the study, there were 19,000 students in the public school district.
2. The study was limited to selected fourth and fifth grade African American students in a select rural, coastal county of South Carolina and could not be generalized to other counties in South Carolina.
3. Only Measures of Academic Progress (MAP) data was utilized to assess student achievement.

#### Limitations

1. The participants for the study were fourth and fifth grade students attending public, rural schools in coastal South Carolina. Therefore, the findings may not be generalizable to other populations of students with different demographic features

from those found in this community.

2. The data obtained was obtained from the state department and local schools' data files and was accepted by this researcher to be accurate.

## Procedures

### *Design*

This study was quantitative and quasi-experimental in design. Chiseri-Strater and Sunstein (2006) state “American culture lends high credibility to measurement and outcomes that offer a way to identify and reward the ‘bottom line’ . . . Quantitative methodology can advance understanding of the many features of schooling and answer questions that can’t be answered any other way.” (p. 88) Limits to quantitative research do exist as Kerlinger and Lee (2000) note: (1) hypotheses are often deflected during the course of the investigation, (2) there is lack of precision in the measurement of variables, and (3) potential practical problems such as feasibility, cost, sampling, and time can occur. By using a quantitative design in this study, the researcher was able to aggregate and analyze Measures of Academic Progress (MAP) from the sixteen elementary schools in a rural school district in South Carolina and remain objectively separate from the subject matter due to the data being collected in the form of numbers.

### *Participants*

The researcher identified fourth and fifth grade African American elementary students from the district’s database. The participants were identified as those students: scoring Below Basic on the South Carolina Palmetto Achievement Challenge Test (PACT); scoring between the 1<sup>st</sup> and 87<sup>th</sup> percentile on the Cognitive Abilities Test (Cog AT); and not receiving any Special Education or English Speakers of Other Language services. Each student was required to have an academic plan and be included in one of the after school programs throughout the district for a

minimum of 30 days or 45 extended school day hours. The record of daily attendance of students is a requirement by the local school district office of federal and state grant after school programs. The students' scores on the South Carolina state test, Palmetto Achievement Challenge Test are provided on the South Carolina Department of Education website (<http://www.myschools.com>). Students' names were used only during the database query and sorting process. All data was coded with a random identifier to protect the anonymity of the students.

### *Data Collection*

Data was collected from the state and school district database to generate a report of fourth and fifth grade students who were administered the PACT during the Spring 2008 administration at each of the sixteen elementary schools. A list was generated from the database for those African American students scoring in the Below Basic level. The following criteria further guided the selection: (1) students identified as special education were omitted from the study; (2) both male and female students were selected; (3) students in all socioeconomic levels were selected. Upon completed of this collection, the researcher contacted, by letter, the coordinator for state and federal programs at the district to discuss the study and process for data collection. The researcher requested and conducted a personal interview and meeting with the district coordinator. Additionally, upon approval from the district coordinator, the researcher contacted each after school coordinator by telephone at the sixteen elementary after school sites to request an attendance record of students and to assess if the after school program was strictly academic in programming or academic with a recreational component. The list of all students, scoring Below Basic on the PACT who attended the after school program were checked against the database for purpose of sorting students into the three groups; those students attending an after

school program with a recreational component, students attending an after school program without a recreational component and those students not participating in an after school program.

A school by school query, using the district database, was performed to collect the Cog AT and MAP scores for both groups of students. After retrieval of these scores, students' names were removed, coded by school and identification number, and all data retained for analysis.

### *Data Analysis*

The Palmetto Achievement Challenge Test (PACT) is a standards-based accountability measurement of student achievement in four core academic areas- English language arts (ELA), mathematics, science, and social studies. The PACT items are aligned to the South Carolina curriculum standards developed for each discipline. An accountability system and a statewide test, such as the PACT, is mandated by the South Carolina Education Accountability Act of 1998 and the federal No Child Left Behind Act of 2001 (NCLB). The PACT test results are reported as total scale scores and performance levels for each of the four subjects. The performance levels were established to reflect the knowledge and skills exhibited by students on the PACT and are as follows: Advanced, Proficient, Basic and Below Basic.

The data obtained for the study was coded and entered into the Statistical Package for the Social Sciences (SPSS) Version 17.0 for the purpose of describing and analyzing. An ANCOVA analysis was used to compare student performance on the Measures of Academic Progress (MAP) after controlling for cognitive ability by using composite scores from the Cognitive Abilities Test (Cog AT). Students were categorized into three groups: (1) students participating in the academic after school program; (2) students participating in an academic after school programs with a recreational component; (3) students not participating in any after school program. Some of the reasons for nonparticipation were: parent did not want the student

coming home at a later time after regular school hours; student was enrolled in a community based organized sport or recreation after school; student was enrolled in private tutoring; transportation concerns; and parent required student to accompany a younger sibling home at the end of regular school day hours.

#### Definition of Terms

*Achievement* - for the purpose of this study will be defined as, gaining academic success reflecting in increased test scores

*Adequate Yearly Progress (AYP)* - a series of performance goals set by the state department of education for each school district and for each school as well as for the state as a whole. Data is collected and released by each state which includes information on whether specific groups of students meet the goals including those that are low-income, minority, special needs or limited English skills.

*At Risk Students* - a student identified at an early age as not graduating from high school due to poor school performance/not performing on grade level or a variety of reasons including family poverty, parental educational level, gender and perceived immaturity.

*Elementary and Secondary Schools Act of 1965 (ESEA)* - the largest federal aid program for our nation's schools.

*Elementary School* - for reference in this study is defined as a school that educates students in grades pre-kindergarten through fifth grade.

*Elementary Students* - for reference in this study is defined as students who attend public school in grades pre-kindergarten through fifth grade.

*Local Educational Agency (LEA)* - referred to and defined by the ESEA of 1965 as the district education department that applies for and oversees the grant

*Low Achieving Student*- for reference in this study is defined by scoring Below Basic on the Palmetto Achievement Challenge Test

*Minority* - for the purpose of this study will refer to African American

*No Child Left Behind* - a 2001 piece of federal legislation enacted during the Bush Administration that affects public education specifically in the areas of school standards and student testing, school accountability systems, educator quality and safe schools; all students need to score proficient or advanced in English and math by 2014.

*Palmetto Achievement Challenge Test (PACT)* - criterion-referenced tests based on the curriculum standards of the state of South Carolina with levels of scores referred to as: Below Basic-did not meet standards; must have an academic assistance plan; the local board policy determines progress to the next grade level; Basic - met standards; minimally prepared, can go to the next grade level; Proficient - well prepared to work at the next grade level; met expectations; Advanced - very high score and very well prepared to work at next grade level; exceeded expectations

*Socioeconomic status* - refers to students from low income families who are eligible for the free or reduced price lunch program

*Title I*- the first section of the Elementary and Secondary Education Act which refers to programs for disadvantaged students

*21<sup>st</sup> Century Community Learning Centers (CCLC)* - a federal funding initiative dedicated exclusively to after school programs

## Summary

Increasing student achievement is a requirement of the NCLB Act as well as the state of South Carolina Department of Education's mandate for achieving adequate yearly progress. Communities and educators across the country are realizing that how children spend their time after school can make a difference in school achievement and academic performance. The federal and state governments have established grants to fund after school programs to provide mentoring, tutoring, enrichment and recreational activities to assist in increasing student achievement.

Researchers have found that while there are many positive attributes in attending an after school program, such as a safe place for students to go to after regular school hours, homework completion, technology opportunities and recreational activities, there is still a gap and inconsistency in the educational research as to whether attending an after school program has an impact on increased student achievement and standardized test scores. There is also little research on elementary after school programs in rural areas. The purpose of this research was to assist educators and policymakers in determining if the after school programs are making a positive impact on student academic achievement and standardized test scores, thereby helping to address the requirements as set by No Child Left Behind requiring schools to make adequate yearly progress (AYP) and provide academic assistance to low achieving students. Therefore, this study examined the impact on achievement for African American elementary students in a rural South Carolina school district after school program.

## CHAPTER 2

### REVIEW OF THE LITERATURE

#### Introduction

The banner slogan for the 21<sup>st</sup> Century Community After School program is *Soaring Beyond Expectations...After School Programs for All*. All includes all school-aged children across this nation in rural, urban and inner-city public elementary or secondary schools. In this chapter, the researcher reviewed the literature that provides the rationale for this study. A review of the literature provided much insight into the history of after school programs, government funding and urban and inner-city after school programs at the elementary and middle school level, however there is less research and literature for rural school based elementary academic school programs. Furthermore, the results of the research and literature on programs addressing the impact of attending after school programs on academic achievement are mixed and many do not meet the rigor of quantifiable research.

#### Background

The Reauthorization of the Elementary and Secondary Education Act and the establishment of the Improving America's Schools Act of 1994, under the Clinton Administration, provided federal grants for after school programs across the nation. These programs, supplemented with Title I monies, were established to improve academic skills and provide a safe place for disadvantaged elementary and secondary students in an after school setting. They served as the foundation for the emphasis and focus on meeting the needs of children across the nation.

Initially, the after school program legislation was funded as a federal demonstration program at a cost of \$1.0 million in 1997. Funding increased to \$453 million in 2000. At present, the

federal level is \$1.08 billion, which is approximately one thousand dollars per child and is issued through state grants. (After School Alliance, 2008)

The purpose of these grants, established by Congress, was to enable school districts and/or communities with rural, urban and inner city public schools to develop activities and projects to enhance the educational, recreational and social levels of the students and subsequently improve the community. Further, the need for such programs was necessitated by fewer parents being at home after school to supervise children.

Nationwide, data compiled from the America After 3 PM survey, found that of the 30,000 families who participated in the survey, 31% percent of Caucasian, 25% of African American and Hispanic, and 21% of Asian-Pacific Islander children in working families were in self care in the afternoon. A closer examination of the America After 3PM survey revealed that African American children are significantly more likely to be in after school programs than other children. There is a greater demand in the African American community than in others due to the fact that more than 25% of African American children have no adult supervision after school. The United States Census of 2000 reported that African American parents ranked lower than their Caucasian counterparts in income and educational status which aligns with the America After 3PM study reporting that African American parents relied more heavily on state or federal funded educational centers or religious organizations to assist their children with homework or remediation.

According to Barton (2004), "Achievement gaps by race/ethnicity and income mirror inequalities in those aspects of schooling, early life, and home circumstances that research has linked to school achievement."(p. 9) From the Emancipation Proclamation issued by President Lincoln in 1863, to the War on Poverty with President Johnson in 1963, to the Reforming and

Strengthening America's Schools for the 21<sup>st</sup> Century of President Obama in 2009, societies' inequalities and achievement gaps have been a political and economic concern for nearly two centuries.

### History of After School Programs

#### *Mid 1800 to Late 1800*

Changes in child labor laws and the structure of working class families led to the emergence of after school programs, referred to as boys' clubs or settlements, in the mid to late 1800s. Children's roles were gradually changing from being workers to being students and with parents at work more and less supervision at home, children had more discretionary time and became more vulnerable to negative influences. Much like the after school programs of today, the goals of the early after school programs were to provide care and protection for younger boys and girls and to create a greater opportunity for enrichment. A Chicago Boys' Club report described many working-class children as "half-naked, under-sized, uncared-for" (CBC, 1908, Box 1, Folder 1). Wald (1915) noted that some children whose mothers worked all day were "locked out during their absence ...expected to shift for themselves," with nowhere to go and no money for meals (p. 111). These factors led children to an increase in risky behaviors and illegal activity. Halpern, (2002), cites a report by Goodman (1979) and Nasaw (1979) which indicated that authorities responded by passing curfews and other street laws prohibiting fire setting, begging, roaming around, loitering, blocking sidewalks, and playing street games. Others, especially in the urban areas of Chicago and New York, viewed the free time as an opportunity to improve society by providing safe constructive areas for children away from the physical and moral hazards of the immigrant neighborhoods in the cities.

The first after school programs were developed by socially concerned men and women intent on rescuing children from the harms of the streets and creating an environment which fostered creativity and self expression while strengthening group skills and character building activities.

For example, Halpern (2002), drawing from *The Boys' Club of New York* (Zane, 1990), uses the example of businessman Edward Harriman who opened a boys' club in 1876 with a membership of seven boys housed in a building located at Tompkins Square in Manhattan. Within 14 years, the club membership grew to over 400 participants. Not only did membership increase, but physical space and program offerings increased as well. The programs ranged from wrestling, writing and bookkeeping classes, a natural history club, to a fife, drum, and bugle corps. This program paved the way for the formation of organizations which included girls and specific ethnic immigrant groups.

As another example, in Chicago's Nineteenth Ward, presently referred to as the West Side of Chicago, Jane Addams and Ellen Starr rented a large, run down mansion, The Hull House, fashioned it after an Oxford University and Cambridge University settlement for the poor and turned it into a center for immigrants. This center, established in 1889, became the first nursery, kindergarten and after school center for the poor and European immigrants of the city. The kindergarten opened with 24 students and within three weeks had a waiting list of 70. Parents were encouraged to come to Hull House to read and look at slides of art while their children were being taught. Addams soon realized there was a need for more activities and developed the first after school program for local teenage boys and girls. From her autobiographical notes, Addams (1990) wrote:

The dozens of younger children who from the first came to Hull House were organized into groups which were not quite classes and not quite clubs. The value of

these groups consisted almost entirely in arousing a higher imagination and in giving the children the opportunity which they could not have in the crowded schools, for initiative and for independent social relationships. The public schools then contained little hand work of any sort, so that naturally any instruction which we provided for the children took the direction of this supplementary work. But it required a constant effort that the pressure of poverty itself should not defeat the educational aim. (p. 63)

#### *Early 1900 to Mid 1900*

After the death of Jane Addams in 1935, Louise Bowen, a wealthy contributor to the Hull House, who also later served as president of the Hull House Association board of trustees, was the most important social figure in Chicago. Bowen was the leader of the Hull House Women's Club and president of the Juvenile Protection Society which stimulated her into carrying out an investigation into African Americans living in Chicago. The report, *The Colored People of Chicago* was published in 1913. She continued to advocate for the education and social equality of blacks and European immigrants in Chicago until her death in 1953. During the 1950s segregation by race in public and private schools was still common in the United States. The South had separate schools for African Americans and Whites, and this system had been upheld by the Supreme Court of the United States in *Plessy v. Ferguson* (1896). In the North no such laws existed, but racial segregation was still common in schools. Segregation usually resulted in inferior education for African Americans. Average public expenditures for White schools exceeded expenditures for African American schools. Teachers in White schools generally received higher pay than their counterparts in African American schools, and facilities in most White schools were far superior.

In 1954 the Supreme Court unanimously ruled in *Brown v. Board of Education of Topeka* that racial segregation in public schools was unconstitutional. Racial segregation was also found in the after school programs however practices varied from city to city. Halpern (2002) reported that boys' clubs were more open to integrating than that of the settlements for fear the White ethnic families would remove their children from the programs. Therefore, African American settlements developed but were short lived due to being understaffed and underfinanced. African American churches, such as Chicago's Olivet Baptist Church, provided some after school programs, but such religious-church based programs rarely reached the poorest of children (Spear, 1967).

### Political and Economical Influences on Education Affecting

#### After School

The Great Depression, World War II, the Cold War, Civil Rights Movement, and other political and social events within the nation illuminated social and racial inequalities in the public school system which resulted in economically and politically driven legislation. The federal response to various needs of child care was limited due to the desire of political figures to avoid involving the government in issues of child care and working women. (Tuttle, 1993) This political position coupled with lack of public school authorities' support for after school programming due to concerns about being involved in a social welfare role and not being in control of organizations using the various public school buildings, left facilities, funding and staffing shortages for after school programming.

#### *The Depression*

The depression of the 1930s brought budget pressures to schools and neighborhood-based after school programs. Public schools were forced to eliminate art, music, and health services

due to the lack of funding. The after school sponsors felt compelled to try and add those classes to the after school programs. The physical and psychological issues of school-age children were also of concern. Noticeable health issues, weight loss, distraction and irritability because of home conditions were listed in the agency notes in a department report at the Chicago Commons (CC, Box 6, Folder 3). Workers at the Chicago Boys' Clubs took pay cuts and had to defend parts of their work, especially the value of play to continue with the responsibility to serve the community of children.

Relief from the depression was on the horizon in 1933 when President Franklin D. Roosevelt was elected to office and enacted the New Deal Legislation. A small portion of the New Deal became available to after school programs through the National Youth Administration (NYA). Lindley and Lindley (1938) note that the Birmingham, Alabama, NYA in cooperation with community leaders, established a boys' club in a low-income African American neighborhood. The services were located in a building donated by a local citizen and offered after school and weekend youth classes in athletics, choral, manual training, art, study skills and helped to establish a library. These monies were also used to help bring renewal to a Chicago south side boys' club, which served African American youth. The NYA funding was used for repairs and staffing. This funding and programming would find a different direction as the depression was coming to an end; World War II was on the horizon. World War II would be financially and emotionally challenging to this nation, its children and families and once again would change the focus of the needs for children, education and after school care.

### *World War II*

Meyer (1943) wrote about the work force and societal changes for women and children during World War II and published her book, *Journey through Chaos*, to give accurate

representation for those women and children left behind. She reported that 6 million women with children under 14 years of age were working in factories and other essential jobs during the War. Rural women and African American women valued new opportunities to escape from the farm labor and domestic work previously done prior to the World War II (Rose 1997).

The role of the public school and after school programs was changing; these programs were part of a society-wide mobilization being asked to help children cope with the stressors of war and transitioning from the comfort of homes to the unknowns of new neighborhoods. In after school programs, providers were giving care and supervision to children of working mothers, helping children to cope with the stressors, and teaching children to contribute to the war effort. Tuttle (1993) writes that “American latchkey child was one of the most pitied home front figures of the Second World War, and his or her working mother was not only criticized but reviled” (p.69).

As Halpern (2002) reported, school-aged children who lived in cities were greatly affected by the climate of fear, worry and anger created by the war. Children living in rural areas struggled with relocation to war production centers near or in urban areas. Due to the demand for labor, with men at war and women supplying the workforce, parental availability continued to decline and the numbers of latchkey children increased as did the need for after school care. Defense Day Care and Defense Recreation Committees set up by the state and local governments provided some after school care and even provided before school care for those women who began the work day before the school hours started.

Local school districts sponsored and contributed partial funding for school-based, extended-day programs which were operated by community agencies and private groups. The remaining costs were paid for by parent fees and local Community Chests referred to as “War Chests”. In

Detroit, Michigan, the State Day Care Committee used “War Chests” funds to begin after school canteens for school aged children. The Los Angeles committees developed their after school programs with the war chest funds in the form of “nursery schools, playgrounds, community halls, gymnasiums, libraries, clubrooms, handcraft and educational classes, and good recreational leadership at the housing projects” (Meyer 1943, p.158).

There was much controversy regarding the offerings of after schools during the war years as there was ongoing political and social debate as to the social and psychological needs of children. Child labor opponents argued the need to protect children from exploitation, “to make certain that the rights which only one or two generations of children had enjoyed thus far were not forfeited” (Kirk 1994, p.58). A few of the leaders in the after school field argued for a continued emphasis on “normal peace time activities in order to offset the constant impact of war” on children (UNH, Box 24, Folder 480). Sponsors of the after school programs, concerned about securing financial support, encouraged contribution to the war effort by having children make bandages and service flags, enroll in after school classes like first aid, telegraphy and airplane design.

Much like today, there were no decisive curriculum answers during the war time for after school programs; the choices then were to provide play and recreation for children to relieve stressors or mobilize them to participate in war efforts so they may feel that they were contributing in some small way. Again, there were conflicting sides, and children, including their school day educational programs as well as the after school programs, were subjected to the decisions being made by the political leaders and community social supports of those programs.

### *The Post War and the Cold War*

In the post war years, as during previous eras, social change led the after school programs to reexamine their purposes and strategies. Halpern (2002) discussed the ethnic and social changes in the low income neighborhoods of the 1950s and 60s. African American and Puerto Rican families were replacing White, ethnic immigrant families in many of the urban neighborhoods and with this change came a change in the rationale and role for after school programs to address poverty related issues and the toxic problems of the neighborhoods much like the issues faced in the late 1800s. After school programs were focusing on ways to lure children into their programs and off the complex social organizations of the neighborhoods involving gang conflict and drug related violence.

Not only were local neighborhoods changing, but the nation was also changing as a result of the Cold War. The Cold War was the continuing conflict after World War II between the United States and the Soviet Union. There was positive educational impact for the United States from the Cold War which included the Space Race and the National Defense Education Act. While there was fear that the United States would be attacked by the Soviet Union and concern that Sputnik, the Soviet successful space satellite was advancing the Russians ahead of the Americans in the Space Race, that same fear and concern influenced the funding of the National Defense Education Act (NDEA) of 1958.

#### Political Impact on Educational Legislation Affecting

##### After School

The NDEA had a substantial impact on public education and advancement in technology and engineering, math and the sciences. There was growing enrollment in colleges and universities; funding was increased to educational institutions at all levels. After school programs received

some of the federal funding through the NDEA and the focus was on patriotism, chess and other analytical, strategic board games, on helping children improve academic skills in math and science, and learning what to do and where to go in the event the Soviets attacked the United States. Americans were concerned they were falling behind as a world super power; although there was a fear of inequality between the two nations, there was a more pressing and growing concern for inequality within our own country. Group leaders were beginning to speak out, especially in the African American community. The inequalities were very evident in 1960 when 40 million Americans, 20% of the population were classified as poor, and “27% of all American children were living in poverty,” (Borman, Stringfield, & Slavin, 2001, p. 22).

During this decade, President Lyndon B. Johnson’s administration enacted reform legislation and accepted as federal responsibility the problems of housing, income, employment and health much like what former President Franklin D. Roosevelt did in the 1930s and the 1940s with the New Deal. President Johnson promoted his plan as the “War on Poverty” and used educational reform as an attempt to help solve poverty in the United States. Written into this law was the Elementary and Secondary Education Act (ESEA) of 1965, which proposed Title I, a program of aid to disadvantaged children. (Jennings, 2000).

### *Civil Rights*

ESEA is one of the most important legislative acts to education and serves as the foundation for other political educational laws. While ESEA was helping to solve the poverty and social inequalities in education the racial inequalities and achievement gaps were coming to volatile focus in the nation. In June of 1963, President John F. Kennedy introduced a civil rights bill which would be voted on and enacted into legislation after his death in November of 1963.

President Lyndon B. Johnson saw the bill become a landmark piece of legislation, as the Civil Rights Act of 1964. The Public Law 88-352 outlawed racial segregation in schools, public places and employment settings. The integration of public schools led to busing requirements for school aged children. The pressure, building from the integration of public schools, public transportation and school busing, and equal employment initiatives, led to the racial urban riots of the mid to late 1960s. Though there was social chaos, there was some attempt by the public educational system to provide a more inclusive and accepting environment to offset the social unrest in the nation. As Halpern (2002) reported,

“The historic core of most after-school programs remained intact. The 1967 program guide to the Hudson Guild, located in Manhattan’s Chelsea district, included arts and crafts, clubs and friendship groups, gym, music... But programs increasingly offered tutoring, homework help, and other forms of ‘educational enrichment’ and also focused increasing resources on what was coming to be known as youth work” (p. 201).

#### *A Nation at Risk*

According to Dwyer (1990) the 1970s and 1980s brought a renewed interest to the after school programming partially due to mothers reentering the work field. The focus again was on the latchkey child but this time there was more of a concern for children’s susceptibility, in the absence of parents, to being left on their own and experimenting with sex and drugs. There was also a growing recognition that the children most at risk were those in the low income neighborhoods; at risk was identified by social conditions and academic concerns which were challenging the educational system.

In 1981, US Secretary of Education, Terrell H. Bell, created the National Commission on Excellence in Education with the mandate to present a report on the quality of education in

America (Holton, 2003). The title of the report, *A Nation at Risk: The Imperative for Educational Reform*, focused on the public schools in the United States. Under the administration of President Ronald Reagan, the National Commission on Excellence in Education required American schools to raise their expectations and improve performance (“Nation at Risk: The Next Generation,” April 23, 2003). Monies were directed from the 1990 federal program, Child Care and Development Program, to subsidizing many of the after school programs located in the low income neighborhoods. The grant money was administered by the states much like the NCLB grants were directed. The 2001 No Child Left Behind legislation, enacted during the President George W. Bush administration, came some twenty years after the published, *A Nation at Risk*, however, many of the concerns were still the same.

#### *Improving America’s Schools Act of 1994*

From the Kennedy/Johnson era, subsequent administrations have continued to accept, with varying reforms, the policies and programs of the “War on Poverty” and ESEA. In 1993, President Clinton and Vice President Gore made a commitment to improve education and the workplace by ensuring all Americans had educational opportunities. Under their leadership, the 21<sup>st</sup> Century Community Learning Centers flourished. “The 21<sup>st</sup> Century Community Learning Centers Program was established by Congress to award grants to rural and inner-city public schools, or consortia of those schools, to enable them to plan, implement, or expand projects that benefit the educational, health, social services, cultural and recreational needs of the community. School-based community learning centers can provide a safe, drug-free, supervised and cost-effective after-school, weekend or summer haven for children, youth and their families” (Department of Education Federal Register, 1997, p. 63776). Only rural or inner-city public

elementary or secondary schools, consortia of those schools, or Local Education Agencies (LEA) applying on their behalf, were eligible to receive the grant.

To assist schools and centers in developing the after school programs, in May 1997, First Lady Hillary R. Clinton released a guide “Keeping Schools Open as Community Learning Centers: Extending Learning in a Safe Drug Free Environment Before and After School”. Partners in writing this step-by-step guidebook were The Department of Education, The National Community Education Association, Policy Studies Associates, and the American Bar Association. This guide detailed the steps necessary to begin a community learning center, a list of resources to assist in the start up, as well as suggestions for estimating costs of obtaining a qualified staff to evaluate the success of the programs. In awarding the grants, Secretary of Education, Richard Riley, assured an “equitable distribution of assistance among the States, among urban and rural areas of a State, and among urban and rural areas of the United States” (Department of Education Federal Register, 1997, p.63776).

The need for an increase in after school programs and community schools is evidenced by the amount of educational literature and research published in recent years. The change seemed to come with the Clinton Administration policy and as the nation grew toward a more global educational focus.

#### *The No Child Left Behind Act of 2001*

Three days after taking office in January 2001, President George W. Bush announced No Child Left Behind (NCLB), his reform of the Elementary and Secondary Education Act (ESEA) of 1965. This law made several significant changes to the 21<sup>st</sup> CCLC program and was reauthorized under Title IV, Part B, of the ESEA. President Bush recommended a 40% cut in funding (from one billion to six hundred million) and a change in applicants to the program from

applying for federal competitive grants to formula grants at the state level. The new statute provided additional state and local flexibility in deciding how the funding could be used to support higher academic achievement and dramatically expanded eligibility for the 21<sup>st</sup> Century Community Learning Center grants to public and private educational and youth-serving organizations.

Not only did the NCLB law affect the after school Community Learning Centers program, it placed accountability in the center of the educational system and required each state to enact a strong structure of accountability based on clear and high standards and a system of annual assessments to measure student progress against those standards (Paige, 2002).

With these political changes came policy changes; however, the focus of the after school programs remained true to its inception of the late 1800s and that is ensuring assistance to children who come to school with disadvantages.

#### Achievement Gap and African American Students

The achievement gap in education is a condition of race and class often discussed as a gap in academic achievement, or performance, between minority and disadvantaged students and their White peers (National Governors Association, 2003b). In education, the term achievement gap is most frequently used to describe the academic performance gap between African American and Hispanic students and their non-Hispanic White peers or the similar academic disparity between students from low-income families and those from more affluent families. A number of solutions to reduce this gap have been proposed.

Some solutions are reflective of substantive thinking while others are representative of quick fixes that dominate public schools but do not improve the teaching and learning of African American students. (Sanacore, 2004). Sanacore further attempts to provide reasons why

students have increased challenges for effective learning and why there is greater impact on African American students including: a divorce rate of 50% to 60% of parents; a changing family structure involving married, remarried, and single parents devoting substantial time and energy to their careers; a decrease in adult supervision after school, which has resulted in more adolescents experimenting with gangs, sex, drugs, and alcohol; an increase in family problems, conflicts with friends, depression, difficulties with male-female relationships and feelings of worthlessness, which have led to a rise in the percentage of teenagers who attempted suicide or considered suicide; and an increase in the number of hours each week that elementary school children watch television (Sanacore, 2001).

The achievement gap shows up in grades, standardized test scores, course selection, high school dropout rates, college completion rates, other academic areas and in diminished job opportunities and lifetime earnings potential. An example of the gap in a standardized test score is the National Assessment of Educational Progress (NAEP), one of the nation's most reliable measures of student achievement, and was administered to a national student sample by the federal government. The results reported by the National Center for Education Statistics (2007) were average math scores of African American fourth graders in 2007 which were higher than those of White fourth graders in 1990; if White student achievement had remained the same, the gap would have been closed, but the White students also gained and the gap continued. This was not the case for reading; the scores for African American students have remained lower than their White peers and have shown no increase.

The April 2008 issue of *Educational Leadership*, dedicated to and entitled "Poverty and Learning", contained an article by Richard Rothstein advocating many reforms for closing the achievement gap one of which was "fund after-school programs so that inner-city children spend

fewer nonschool hours in dangerous environments and, instead, develop their cultural, artistic, organizational, and athletic potential” (p.12).

The achievement gap has been a key education-policy challenge and top priority for U. S. governors and other state policymakers since the mid-1980s. The No Child Left Behind Act (NCLB) required states to set the same performance targets for all children (including economically disadvantaged students, students with disabilities, limited English proficient and major racial and ethnic groups), and if any student subgroup fails to meet those performance targets, districts must provide public school choice and supplemental services to those students. Many schools struggle to meet this requirement and do not exceed in closing the existing achievement gaps. As Barton (2004) points out the gaps, by race/ethnicity, reflect the inequalities of schooling, early childhood, and home life. The most pronounced gap is between the African American population and their White counterparts, even though over fifty years have passed since the United States Supreme Court handed down its landmark decision in *Brown v. Board of Education* mandating the desegregation of schools which it was thought would thereby improve the quality of education for African American children.

#### Programs Addressing the Achievement Gap

Schools are attempting to implement programs that will shrink and eventually close the achievement gap for the African American school aged population. Some of the most successful schools addressing the disparity of student achievement operate after school programs, while others address academic needs of low achieving students in out of school time with Saturday school, extended learning time (usually held during vacation days), and summer school and/or with community schools. The program activities differ depending on how the grant was written and in the governmental funding source which supplied the grant. The No Child Left Behind

Act narrowed the focus of after school programming from a community learning center model, which was popular during the Improving America's Schools Act under the Clinton Administration, to an after school program model that provides the following services to students attending high poverty, low performing schools:

- Academic enrichment activities that can help students meet state and local achievement standards.
- A broad array of additional services designed to reinforce and complement the regular academic program, such as: drug and violence prevention programs, counseling programs, art, music, and recreation programs, technology education programs, and character education programs.
- Literacy and related educational development services to the families of children who are served in the program. (U.S. Department of Education, 2003)

Zurawsky (2004) highlights successful programs for African American children, such as the Calvert Program out of Baltimore and Knowledge is Power Program (KIPP) from North Carolina. The programs have shown much success with the African American population, therefore the U. S. Department of Defense now blends key elements of both programs into their school system.

One of the elements of the Knowledge is Power Program supports after school, Saturday classes and summer sessions. Doran and Drury (2002) found that 93% of KIPP students passed the 2002 end of the year reading exams showing a 36% improvement over the year before when the students attended other schools.

Chicago's Community School Initiative is another example of a successful concept in addressing the achievement gap between African American children, Hispanic children and their

White peers. Operating a portion of their schools as full service community schools, which includes an after school program, the Chicago public school system initiative is based on the 100 year concept of John Dewey and Jane Addams who promoted collaboration and community involvement, by providing academic tutoring, social services and activities for children and their families. Chicago Public School's Office of After School and Community School Programs, was established in September 2001. Under the Improving America's Schools Act, programs qualifying for federal funding during this time period were more inclined to involve the entire community to enrich the development of the whole child outside of the regular school day. Wolfe (2007) reports the Chicago Public School System, one of the largest school systems in the United States, is becoming "the testing ground for the community schools concept" (p. 3). One report from the Community Schools Initiative (CSI) is that 81% of the schools are showing improvement in academic achievement compared with 74% of regular schools (Blank & Berg, 2006). The University of Chicago conducted a three-year evaluation of the CSI and found in reference to standardized test scores for a large sample of students who participated in after school programming in 2006, in reading, 55.5% of students tested met or exceeded the Illinois state performance standards; in math, 63.8% and in science, 61.0%. In a conclusive statement from the report, the researchers agree there is early evidence that the most penetrating impact of the CSI may be the improvement in academic performance and not exclusively the students who participate in after school programs but for the overall cohort of CSI schools (Whalen, 2007).

In order for an after school program to be academically successful for the school and students, all of the parties must work together to achieve the goal of improved achievement and remove any barriers to learning. This is an important action for school administrators to take in making adequate yearly progress which is required by NCLB. As a result of the No Child Left

Behind reform and increase in funding from the federal government, mandates were in place to analyze the effectiveness of the after school programs.

Not only did the NCLB law affect the funding for the after school program, it placed accountability in the center of the educational system and required each state to enact a strong structure of accountability based on clear and high standards and a system of annual assessments to measure student progress against those standards (Paige, 2002). With this current emphasis on performance standards and testing, schools have looked to the after school hours as time that can be spent developing children's academic skills (National Institute on Out-of-School Time, 2001). The focus was moving from programs with mixed activity-academic, recreational, character building-to those focusing more on the academic achievement component. Previously, administrators tended to focus on after school programs as a means to provide supervision for children whose parents were employed during the after school hours and /or students coming from high risk circumstances and needing extra assistance; that was changing due to the federal and state requirements in showing accountability and the need for academic improvement to make adequate yearly progress as deemed necessary by the NCLB.

#### Review of Prior Research Studies

While there are numerous after school research studies, it is important to note the research methodology concerns that researchers and authors have on the prior studies and citations. Gayl (2004) reminds researchers and policymakers debating the issue of after school programs that the national commitment to the programs and required evaluation for those programs is only 10 years old. As an example of concern for the research, Mid-continent Research for Education and Learning (2004) researchers performed a search which resulted in 1,808 citations addressing the effectiveness of a program delivered outside the regular school day for low achieving or at-risk

K – 12 students 371 reports were obtained and only 53 met the criteria for their study based on the methodological rigor and content of the research.

Fashola (1998) was also critical referencing after school studies as in the “rudimentary stage” (p.77) of research. The author further states that the research meets minimal standards of research design and almost all suffer from selection bias. The rigor of the research has become more scrutinized and there is more of a demand placed by the federal government legislation, NCLB, due to the implications of funding and academic success of the programs on student achievement.

With mixed results and less than ideal quality of the research, there is also the factor of variety of the studies on after school programs and the quality of those research studies at times failing to meet minimal research design standards as described by a team of researchers from the RAND corporation concluding that there were few studies emulating high scientific standards (Beckett, Hawken et al. 2001). Vandell and Pierce (2001) discuss limitations of previous research noting methodological limitations and research not controlling for selection factors especially variations in the studies. The researchers stated, “Many of the same methodological limitations that plagued that early research (Belsky & Steinberg, 1978) are still common in after-school studies” (p. 2).

Based on those concerns from expert researchers in the field of after school studies, this researcher has refined this study to focus on school based after school programs, upper elementary, African American, low achievement with academic outcomes and geographic rural location and to include relevant reports and evaluations from prior major and national studies by leaders in the field, U.S. Department of Education contracted research, and university accepted and approved research.

### Major Studies with Mixed Academic Findings

Researchers from the University of Wisconsin-Madison, Jill K. Posner and Deborah Lowe Vandell, have been leaders for conducting research in the field of discretionary time after school, after school programs and low-income urban children. Vandell and Posner (1999), in a longitudinal study, examined the after school activities of 194 third, fourth and fifth grade African American and White children from low income households. The curriculum of the after school programs, like many in other research studies, varied from year to year. The program was sponsored by the school district, offered remediation (homework help, reading, math), recreational (drama, basketball, arts and crafts) and related arts (technology, science and creative writing). Certified teachers were responsible for the remediation and related arts. As reported, the African American and White children who attended after school programs spent more time on academic and extracurricular activities and the children not attending the after school programs spent more time watching television and engaging in unstructured activities. For the African American children in the sample, time doing nonsport extracurricular activities after school was associated with better teacher-reported emotional adjustment in school, time socializing was associated with better academic grades and work habits and time in coached sports was associated with lower academic grades (Developmental Psychology, 1999).

Another study from Vandell et al. on academic effectiveness of after school programs for elementary children include a more recent 2007 longitudinal study that reviewed 35 programs (19 of which were elementary) in 8 states (6 urban areas and 6 rural areas) and found that elementary school students who attended the programs across 2 years demonstrated significant gains in standardized math test scores compared to their peers who were unsupervised during the

after school hours. All programs served high concentrations of students who were ethnically diverse and from low income households.

Reisner et al. (2001) surveyed staff, parents and youth and collected scores from standardized test in 240 urban, suburban and rural after school sites in New York's The After-School Corporation (TASC). The researchers found that among the TASC elementary and middle school participants, the average change in scores on the math test was 1.4 standardized scale score points more than the predicted scores. Russell et al. (2006) in the New York City Department of Youth and Community Development's Out of School Time evaluation found that participants who attended programs with a strong academic focus reported more academic benefits from participation and higher academic self-esteem.

When assessing after school programs researchers often survey staff at the site of those programs; however, in 2001, with funding from the Charles Stewart Mott Foundation, the National Association of Elementary School Principals (NAEP) undertook a national survey of 800 public school PreK – 8 principals and the issues of after school programs, including involvement and interest, staff training and support. While many factors were surveyed, for the purpose of this study, the factors relating to academic outcomes, low achieving students and geographic locations will be reported. Overall, the principals reported the after school programs as very successful (57%), an extremely important part of their school (77%), improving student academics (34%) and a safe place for children during the hours between the close of the school day and before the children return home (26%). The surveys reflected the after school programs provided a range of activities and instruction with 96% reporting help with homework; 67% reporting the after school learning activities linking with the students' school day classroom learning and to a lesser degree, 45% report recreation and sports as part of the program. The

principals' concerns for the program were the newness of the programs, funding and staff challenges, as well as providing more opportunities to serve more students with more activities. At the time of the survey, principals without an after school program were more likely to be found in smaller schools and in the Northeast and those needing the most help with their existing program were those in high poverty schools with less well established programs.

Klein & Bolus (2002) found statistically significant improvements in reading and math scores between pretest and post test for approximately 500 students in grades 1 – 5 enrolled in the Foundations After School Enrichment Program in urban and rural areas of Pennsylvania, New Jersey and Florida. Researchers reported the Foundations students were progressing faster than the national norm group in math skill development and they were keeping pace with the norm group in reading.

A narrative review of 27 studies of after school programs were provided by McComb and Scott-Little (2003). After comparing results of the studies, they concluded that large variations in programs, including content, size, and goals along with the research designs of the studies prevented a simple answer to the question about the effects of after school programs on academic outcomes. The researchers were not able to reach a conclusion however they focused the discussion of their study on conditions that favored positive student outcomes such as students attending the after school programs more frequently benefited more than those who did not have regular attendance in the programs. Baker & Witt (1996) concurred with the findings on the reporting that the more students were involved in an after school program, the more academic performance improved. Fashola (1998), in a report for Center for Research on the Education of Students Placed at Risk (CRESPAR), an organized partnership between John Hopkins University and Howard University, reached a similar conclusion to McComb and Scott-Little (2003)

referencing effectiveness of program outcomes. In the review of 34 extended-day or after school programs, in urban and suburban areas from various states,( such as Missouri, Connecticut, Tennessee, Maryland, just to name a few) the author concludes, “that stronger evaluations of these and other current after-school programs must be conducted, and other well-designed programs need to be developed and evaluated, in order to produce after-school programs that can be considered to be effective and replicable for increasing student achievement or other student outcomes” (p. 4).

Long before mandates were in place requiring grantees to analyze the effectiveness of after school programs, the Harvard Family Research Project helped with accountability of such programs by conducting a major longitudinal after school study. The study, often referenced as a good quantifiable study by other researchers, was performed by the Center for the Study of Evaluation, University of California, Los Angeles, and consisted of a series of evaluations. The after school program, Los Angeles’ Better Educated Students for Tomorrow Program (LA’s BEST), was created in 1988 between the City of Los Angeles and the private sector. The program was funded at \$15 million per year through a partnership between the City of Los Angeles, the Los Angeles Unified School District, and the private sector.

There were 101 elementary schools in 10 sites, serving 14,000 students, providing a safe environment, integration of educational support, educational enrichment, recreational activities, interpersonal skills and self-esteem development. The evaluation began in the 1989-1990 school year and the final evaluation, impact study, was concluded in 2000 with follow up studies performed in 2005 and 2007. In the initial evaluation it was found that “greater participation was significantly related to positive achievement on standardized

Table 1  
*Studies Related to After School Programs*

Study	Purpose	Participants	Design	Outcomes
Whalen (2007)	to examine academic success, grades and achievement variables for Chicago's Community School Initiative (CSI) after school programs	5,500 students in grades 3-8 in Chicago's Community School Initiative (CSI) after school program (referred to as OST (out of school time))	Correlation and multiple regression study	Non-CSI schools realized somewhat greater gains in reading but not significantly significant. CSI schools did realize higher gains in math (19.5%) when compared to non-CSI schools (16.5%) at a significantly significant level
Posner & Vandell (1999)	after school program activities studied to determine relations with children's adjustment and child, family, contextual variables	194 African American and White children from low income households followed from the time they were 3rd graders up to 5th grade	Longitudinal Study	Children who attended after school programs spent more time on academic and extracurricular activities whereas children not attending spent more time watching TV and hanging out
Huang, Gribbons, Kim, Lee & Baker (2000)	LA's BEST- Harvard Family Research Project to examine student performance and attitude	240 3rd - 6th graders attending six identified study sites in a Los Angeles based after school program	Longitudinal Study	Students feel safer and educational support goals were being met; overall student grades were found to be significantly higher for the after program participants as compared to nonparticipants

Table 1 continued  
*Studies Related to After School Programs*

Study	Purpose	Participants	Design	Outcomes
Farmer-Hinton (2002)	Chicago's Lighthouse Program (Academic and Recreation) was examined for impact of after school participation on student academic achievement	School based after school remediation program for 3rd through 8th graders primarily African American and Hispanic with 90% free/reduced lunch	Quantitative Methodology and Descriptive Analysis	Lighthouse students made a 1-month gain in reading and math over non-Lighthouse students
Kraft (2001)	Review of five after school programs in northeastern Kansas to establish baseline data and to determine the impact the program had on participants	110 elementary children	Qualitative with some quantitative data collected	Vast majority of stakeholders were extremely satisfied with the Community Learning Center program and individual sites; student academic benefit was mixed for math 32 students increased, 25 showed decrease and 47 remained the same; in reading, 46 showed an increase, 13 showed a decrease and 46 remained the same.

Table 1 continued

*Studies Related to After School Programs*

Study	Purpose	Participants	Design	Outcomes
Charles Mott Foundation and Policy Study Associates (2007)	Vandell, Reisner & Pierce After school researchers reviewed 35 programs in urban and rural areas of eight states.	3000 low income, ethnically diverse 3rd and 4th grade elementary and middle school students from 8 states in urban and rural locations	Longitudinal Study	Elementary students who regularly attended the after school programs either in Program Only or Program Plus demonstrated significant gains in standardized math test scores compared to their peers who were not enrolled in the programs. The reading achievement was not reported because the findings did not meet the study's baseline criteria for reporting.

Table 1 continued  
*Studies Related to After School Programs*

Study	Purpose	Participants	Design	Outcomes
Klein & Bolus (2002)	Improvements reviewed in math and reading scores for students who did and did not participate in the Foundations After School Enrichment Program	500 students in grades 1 - 5 in urban and rural schools in Pennsylvania, New Jersey and Florida	Quantitative	Statistically significant improvements in both reading and math scores between pretest and posttest for participants; participants progressed faster in math skills than nonparticipants and kept pace with the nonparticipants in reading.
Reisner, White & Welsh (2001)	Research of New York's The After-School Corporation (TASC) student success and sustainability	240 urban, suburban and rural sites for Pre-K through high school students	Quantitative	Among the PreK-8 participants, the average change in scores on the math test was positive and significant as compared to the nonparticipants
Russell, Reisner, Pearson, Afolabi, Miller & Mielke (2006)	Evaluation of New York City Department of Youth and Community Development's (DYCD) Out-of-School Time Programs for Youth Initiative	13,000 elementary, middle and high school students in New York City	Qualitative	Participants reported more academic benefits and higher self esteem as well as higher levels of arts activities were also positively associated with the same

Table 1 continued  
*Studies Related to After School Programs*

Study	Purpose	Participants	Design	Outcomes
McComb & Scott-Little (2003)	Evaluations and outcomes of after 27 after school programs.	Varied	Narrative review	Inconclusive results due to the large variations in program content and research designs preventing a simple answer to the effects of after school programs on student academic outcomes
Fashola (1998)	Review of extended day and after school programs and their effectiveness.	34 extended day and after school programs in various urban and suburban settings involving all grade levels of students from all backgrounds	Meta synthesis	The author suggests that research on after school programs was at a rudimentary stage with few studies meeting minimal standards of research design; lack of research to support conclusions for student achievement
Baker & Witt (1996)	Evaluation of two academically oriented after school programs and the involvement of activities that promote cultural awareness, positive self esteem and attitude	302 low socioeconomic 3rd - 6th grade students in Austin, Texas	Quantitative	The more students are involved in an after school program, the more academic performance improved.

Table 2  
*Department of Education After School Studies*

Study	Purpose	Participants	Design	Outcomes
California Department of Education, University of California, Irvine and Research Support Services (2002)	Evaluation of the YS-CARE after school program	Public school children from low socioeconomic backgrounds in the Los Angeles area	Quantitative	Participants of the program had higher reading and math gains on the Stanford-9 test than nonparticipants
System Wide Solutions, Inc. for South Carolina Department of Education (2007)	Evaluation of the SC 21st Century Learning Center Program	92 sites throughout the state of South Carolina including all grade levels of students attending ASP	Mixed Methodology	Overall, the participants who met or exceeded the state standard in reading increased by almost 5% during the 2005-06 school year and decreased by 2.6% for math; specifically for elementary students, there was a decrease in reading PACT scores and an increase in Math PACT scores; there was no significant relationship found between the differences in PACT scores and whether the site was located in a rural or urban setting
After school Alabama Program for Rural Services and Research (2003)	To develop baseline for examining after school programs across the state of Alabama	600 after school programs across the state of Alabama	Surveys	Inequity in the after school programs when comparing rural setting to urban communities; demand for more programs in rural areas

Table 2 continued  
*Department of Education After School Studies*

Study	Purpose	Participants	Design	Outcomes
U. S. Department of Education (2003) Mathematica Policy Research, Inc.	When Schools Stay Open Late: The National Evaluation of the 21st Century Community Learning Centers Program, First Year Findings	1000 urban ,rural, elementary and middle school students identified by low and moderate socioeconomic levels in 18 schools within 7 districts	Quantitative Methodology	Students felt safer and educational support goals were being met; no academic differences found between participants and non participants at the elementary level for math or reading
U. S. Department of Education (2004) Mathematica Policy Research, Inc	When Schools Stay Open Late: The National Evaluation of the 21st Century Community Learning Centers Program, New Findings	Increased number of students in elementary study from the First Year Study to 2,308 elementary students from 32 school districts	Two year quantitative study	Generally, consistent with the findings from the First Year Study in that the programs did not affect reading test scores or grades for elementary students
Mid-continent Research for Education and Learning (McREL)(2004)	The Effectiveness of Out-of-School-Time Strategies in Assisting Low-Achieving Students in Reading and Mathematics: A Research Synthesis	53 after school Studies with 23 of the studies addressing outcomes in both reading and math; demographics were diverse	Meta-Analysis	Overall, the synthesis resulted in statistically significant positive effects of after school programs on both reading and math student achievement; however, upper elementary students (3-5graders) experienced the smallest effects, including negative effects in reading and the smallest overall effects in math which was not found to be significantly significant

Table 2 continued  
*Department of Education After School Studies*

Study	Purpose	Participants	Design	Outcomes
U. S. Department of Education (2008) Manpower Demonstration Research Corporation (MDRC)	The Evaluation of Enhanced Academic Instruction in After-School Programs	Research based math and reading instruction in after school settings located in 16 sites within 13 states for students in grades 2-5 below grade level from diverse social and economic backgrounds predominately black and low income	Quantitative with a Random Assignment Design	Positive and statistically significant impacts for the after school enhanced math program on student achievement based on SAT 10 math test; students in the enhanced reading program did not experience a statistically significant impact on their performance on the SAT 10 reading test
National Association of Elementary School Principals (NAESP) (2001)	Telephone survey of 800 public school principals to examine the existence and characteristics of after school programs	Public school principals nationwide serving in schools PreK-8; 400 principals were members of NAESP and 400 were not members	Telephone Survey and Demographic Statistics	After school programs are prevalent around the country; principals see their programs as very successful and an important aspect of their school; the success rest on providing academic support and a safe place for children; there are funding and staff challenges along with the desire to expand the program

tests of mathematics, reading, and language arts when the influence of gender, ethnicity, income, and language status was controlled for” (p. 16).

Additionally, there was an evaluation of Chicago’s Lighthouse Program, *When Time Matters: Examining the Impact and Distribution of Extra Instructional Time*. The Lighthouse Program began as a corporate-sponsored after school day program to assist 40 schools in improving their test scores. (Smith et al., 2001) At the time of the evaluation, the Lighthouse program had qualified for federal grant monies and was operating as a school-based, after-school remediation program in the 491 elementary public schools. The Lighthouse program included an extra hour of instructional time and an hour of recreational time, with a healthy late afternoon meal served in between the two activities. The results of the study showed that the after school students made a one month gain in reading and math over students who did not attend the after school program. Further findings indicate that the after school students in predominantly African American schools were performing better in reading than the after school students who were in schools that were not predominantly African American. (p. 194)

There is further evidence to suggest that certain subgroups of students may be making targeted academic achievement gains. For example, the University of California at Irvine and Research Report Services (2002) conducted a study on the after school program, YS-CARE which targets children from families on welfare in Los Angeles area, and found the program participants had higher reading and math gains on the Stanford-9 test than similar children who were not participating in the program.

The NCLB Act of 2001 required that activities in the after school programs be based on scientific research. The legislation further required states to develop performance indicators and measures to be used to evaluate programs and activities which resulted in an increase in research

and literature. Consequently, the U.S. Department of Education began funding more of the research on the effectiveness of the after school programs.

#### Federal Government Contracted Research Studies

One of the most highly supported national studies was, *When Schools Stay Open Late: The National Evaluation of the 21<sup>st</sup> Century Community Learning Centers Program*. In 1999, the U.S. Department of Education contracted with an evaluation team from Mathematica Policy Research, Inc., to evaluate the federal government funded, after school programs. For the purpose of this research, findings will be reported on the elementary program only.

In the initial evaluation, the team collected student outcome data for approximately 1,000 elementary students in 18 schools within 7 school districts. The study was based on random assignment and outcome of students assigned to the program were compared with outcomes of students not assigned to the program. The first report was released in February of 2003, and the findings in relation to academic/achievement were that the program- group students did not improve their reading test scores or their grades in math, English or science as compared to the control group. They did improve their grades for social studies. Additional data, with an increase in elementary school programs and students, was collected in the second year of data collections and New Findings (of) October 2004 were reported. Again, students attending after school programs scored no better on reading test than their nonparticipating peers, nor did their grades in English, math, science or social studies increase.

This important national study led to the political and educational debate over whether evidence supports increased investment and funding for after school programs. The Department of Education answered by contracting for a more conclusive research synthesis and the findings were reported in 2004.

The study, *The Effectiveness of Out-of-School-Time Strategies in Assisting Low-Achieving Students in Reading and Mathematics: A Research Synthesis* was conducted by Mid-continent Research for Education and Learning (McREL) in 2004. The researchers began with a literature search of all research and evaluation studies, conducted after 1984, which examined program effectiveness, practice, or strategies delivered out- of- school- time (OST) to improve student achievement for low achieving students in kindergarten through twelfth grade. Out of school time programs were defined as those programs operating directly after the school day, or on weekends, in summer months, or intersession of school holidays. In all, 371 studies were identified; however, the study was limited to address 53 of those studies due to methodological concerns. All studies selected used comparison/control groups to measure reading and/or math student achievement for low achieving students.

McREL used a meta-analytic method to synthesize the results of the studies and to estimate the overall impact of the out-of-school-time (OST) programs on student achievement. Meta-analysis is described by Bangert-Drowns et al. (1986) as a collection of systematic techniques used to resolve contradictions in research findings. McREL used numerous investigators to study the prior research and define the review's purpose which was to estimate the impact of the OST programs on student achievement. The researchers then made the 53 sample selection that met the specified criteria for being included in the Department of Education study. The data were collected, coded according to the review and examined for checks on threats to validity. The data were then transformed to a common metric for comparison. Results were further analyzed for the influence of moderators of effect which included after school or summer school, grade level of students, strategies (academic or academic and social), duration of the program and size of grouping of students.

Overall, the synthesis resulted in a small, though statistically significant positive effect of OST programs on student achievement in both reading and math for primary elementary and high school students. Specifically, after accounting for grade level moderators, in the area of reading, the largest average positive effect size (.26 based on 14 effect sizes, a gain of 10 percentile points) occurred for elementary students in grades kindergarten through 2. For mathematics, the largest average positive effect size (.44 based on five effect sizes, a gain of 17 percentile points) was for high school students in grades 9 – 12. For the purpose of this research, the researcher further reviewed the studies included within the 56 final McREL research to select the studies which correlated more closely with this specific research involving upper elementary (third, fourth, fifth grades) students attending an after school program, as opposed to summer school/extended learning time or Saturday/weekend school, using academic or academic and social/recreational strategies. Those research studies were: Baker & Witt, 1996; Cosden et al., 2001; Huang et al, 2000; Lodestar Management Research,2003; Pyant, 1999; and Welsh et al., 2002; and all were urban research studies geographically located in the areas of Austin, Texas, Baltimore, Maryland, Los Angeles, California, Memphis, Tennessee Santa Barbara, California and Queens, New York.

The compiled results, in the area of reading, in comparison to the lower elementary students, the upper elementary students experienced the smallest effects, including negative effects (-.04 based on 13 effect sizes) reflecting in a loss of percentile points; and for mathematics, the upper elementary interventions reported the smallest overall effect size (.05 based on 11 effect sizes) which is not significantly greater than zero. As noted in the report findings, the results for the upper elementary students support the research showing that interventions focused on the prevention of reading disabilities and delays in elementary students are most effective when they

can be delivered to students early and prior to reading problems and the emergence of low self esteem which further complicates the learning process (Mathes, 2003). As far as strategies that involved strictly academic or academic and social, the outcomes were: for reading, activity focus did not have a statistically significant impact on achievement; for math, strategies that were both academic and social had a slightly higher mean effect than those that were strictly academic.

### Rural After School Programs and Research Studies

In the literature and research review, there are few reports of rural after school research; most research is identified by population or participants in the urban and suburban areas of the country. There is increased interest in the need of support for after school programs in rural areas of the United States, so much so that the United States House of Representatives has introduced a bill, H.R.3078: Investment in Rural After-School Programs Act of 2009. After school program providers in rural areas face a set of concerns that differ from the urban/suburban programs. As reported by an Afterschool Alert Brief (2007), after school programs in rural America have unique barriers including higher transportation costs; less funding per child because of lower tax base resulting from a smaller population; and fewer trained staff as well as fewer community based organizations for partnership.

A recent 2008 study contracted by the U.S. Department of Education with Manpower Demonstration Research Corporation (MDRC) reviewed after school academic instructional programs comparing structured curriculum for the after school programs with an unstructured curriculum/homework help programs. While this study was focused on the curriculum of the after school programs, there was inclusion of 3 rural schools in the total of 25 schools chosen for the experimental program for math. Specifics of location were not shared although it was stated the 16 after school sites were located within 13 states. No rural schools were selected for the

enhanced program for reading. There was a random assignment design for students in second through fifth grades identified as being at least one grade level behind in math and enrolled in after school programs. Students identified as behavior concerns or with special needs were not included in the study. All students had to be able to receive instruction in English as the ethnicity for the study was mixed with African American students being the largest group at approximately 44%, White 32% and Hispanic 19%, others at 2%. Data were collected from students, regular school day teachers and school records. The Stanford Achievement Test, Tenth Edition (SAT 10) abbreviated battery for math was administered to the students selected for the math study at the beginning and end of the school year to measure the gains in achievement. The findings for the full analysis sample were the group of students who attended the enhanced math academic after school program increased its average test score by 35.8 scaled points as compared to the students in the regular after school math program with increased average total math test score by 33.0 scaled score points over the school year. This results in a 2.8 scaled point difference (effect size = 0.06), an 8.5 percent difference in growth which is a statistically significant math impact. The findings for reading were the students participating in the enhanced reading after school program did not experience a statistically significant impact on their performance on the SAT 10; further, there were no statistically significant impacts, either positive or negative reported for the basic after school reading program. It is important to mention that the study was not designed with the power to detect impacts at the level of individual centers, 17 of the 25 centers did have positive point estimates of the enhanced program; 8 of the 25 had negative point estimates.

Further review of the literature produced an after school study in rural northeastern Kansas through the University of Kansas School of Education. Five sites received funding through the

U.S. Department of Education's 21<sup>st</sup> Century Initiative to establish after school programs. A total of 110 elementary children attended the programs, which varied from school site to school site, and required a performance report which consisted of student achievement test scores to serve as a baseline for the 3 year study, teacher grades in math and reading, and attendance and behavior data. The evaluation process involved parents, students, teachers, principals, site coordinators, site staff, community volunteers and members of the advisory committee. Methodology was grounded in qualitative methods but also inquiry and quantitative data were collected. The researcher reported that based on the findings enumerated in the report, the vast majority of all stakeholders groups were extremely satisfied with the Northeast Kansas Community Learning Center (NKECLC) program and the individual sites. As far as student academic benefits, in math, 32 students showed increase, 25 students showed decrease and 47 remained the same; in reading, 46 showed an increase, 13 showed a decrease, and 46 remained the same.

After School Alabama, under the direction of the Alabama governor's office, and set in operation by the University of Alabama's Program for Rural Services and Research, researched some 600 after school programs in existence across the state. Findings revealed that there are demands for after school programs especially in the rural areas. The surveys showed a great inequity in the after school program services when comparing the affluent, urban communities with the small, rural communities. Academic data were collected for the Phase I of the study as a baseline for Phase II. (Dowling, 2003)

An Evaluation of the South Carolina 21<sup>st</sup> Century Learning Center Program was completed and prepared for the South Carolina Department of Education in April of 2007. The statewide evaluation is a five-year-long process with the purpose of determining if the South Carolina 21<sup>st</sup> CCLC followed the required objectives for the Federal 21<sup>st</sup> CCLC and to conduct an in-depth

evaluation comparing changes in the PACT scores of students attending the after school programs to the PACT scores of those children in the same schools who did not attend the programs. The researchers found there were no significant relationships between the difference in the PACT scores and whether the site was located in a rural or urban setting. Academic outcomes were one part of the study and the overall findings were the percentage of participants who met or exceeded the state standard in reading increased by almost 5%; for math, the percentage of participants who met or exceeded the state standard decreased by 2.6%. However, specifically for upper elementary students, there was a reported decrease in reading and an increase in math. Classroom performance was measured through a survey of the participants' classroom teachers (which some researchers consider arbitrary) and there was reported improvement among the students on ten different scales varying from the highest at 69.2% for improved class participation to 37.6% for improved on attending school regularly.

Save the Children, a literacy and nutrition after school program in rural Manning, South Carolina, provides supplemental literacy education for students in grades 2 and 3, 83% of whom receive free or reduced-price lunch. The students receive daily literacy activities which include guided reading, fluency building support, and read aloud. They also learn basic principles of healthy eating and physical activity. Though there are no data or research reported for this program; however, in a telephone interview, the coordinator of the program reported the after school program is what helps the children to read on grade level and provides them with nutritional awareness.

Kane (2004) suggests in his book, *The Impact of After-School Programs: Interpreting the Results of Four Recent Evaluations*, that large impacts from after school programs should not be expected on academic achievement unless time spent in an after school programs is

extraordinarily more beneficial than the time spent in the school day classroom, which is unlikely. The author explains that after school programs have demonstrated effects on conditions that contribute to student achievement and participation in these programs can support improvements in student achievement even if the programs themselves have limited academic impacts.

### Summary

Early studies of mostly urban after school programs reported inconsistent results in comparing children who attended the programs with those who did not. More often, program studies were not comparative or they lacked quantifiable evidence which other researchers would accept as proof of after school programs resulting in increased academic performance. Government funding and leadership has begun to place accountability in the center of the educational system and require each state, district and school to enact a strong structure of accountability based on clear and high standards and a system of annual assessments to measure student progress against those standards. The measure and assessment remains inconsistent for after school programs. For example, research on after school rural programs and focus on children's academic performance, relating to after school programs as an extension of the school day, is just beginning to emerge. Most of the previous studies have been in New York, Chicago, and Los Angeles where major universities are located and there is interest in such educational research. Child Trends, a nonprofit, nonpartisan research center reports that rural after school programs share many of the same challenges as other after school programs but there are other unique challenges that hinder the success of the rural programs. Therefore, there is need for further studies and research due to the mixed findings on the academic component of the current studies as well as the limited studies researched on the rural programs.

## CHAPTER 3

### RESEARCH METHODS

#### Introduction

With increased focus on academic progress and accountability, the importance of nationwide after school programs has been at the pinnacle of state and national educational attention and political debate. Initially, grant monies were established by the federal government under the Clinton Administration but were later transferred to the states under the No Child Left Behind Act (NCLB), during the Bush Administration. The purpose of these grants, established by Congress, was to enable school districts and/or communities with rural, urban and inner city public schools to develop activities and projects to enhance the educational, recreational and social levels of the students and subsequently improve the community. Furthermore, the need for such programs was necessitated by fewer parents being at home after school to supervise children and, more recently, school administrators have turned to the after school hours to address the educational achievement gap for low achieving students. Additional information in Chapter 2 has given more direction for this study to focus on the achievement gap for low achieving African American students.

Since the after school inception in the late 1800s, there have been substantial changes in programming over the years which reflect societal changes, as well as the impact of the legislative and educational movement of the nation. Shumow (2001) reports the current emphasis on performance standards and testing has led schools to look more to the development of academic skills rather than focusing on after school as a means to provide supervision for children whose parents are working during the after school hours. As the pressure for students and schools to meet the challenging academic standards, parents, administrators and

policymakers are looking more to the after school hours as a crucial time to help academically prepare students (Bodilly and Beckett, 2005). As outlined in Chapter 2, a compendium of articles based on national research have found key issues relating to after school programs including unmet needs and challenges of program quality. Early studies of after school programs reported inconsistent results and, as suggested by Lauer et al, in a 2004 report commissioned by the Department of Education, “the studies reviewed were rated as medium in research quality because they did not adequately describe the OST intervention or its implementation” (p.3). Therefore, the purpose of this study was to fill a gap in the educational literature by investigating the elementary after school programs in one rural county in the state of South Carolina, and the impact of those programs on the achievement of low achieving elementary African American students.

Chapter 3 outlines the after school programs (independent variable) and methodology of the study, including the instrumentation (dependent variable) and research procedures and concludes with an explanation of the data analysis procedures.

### Research Questions

The researcher, through this study, addressed the following overarching research question: What is the impact of after school programming on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural public school district? Further, specific sub-questions guided the research:

1. After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational

component, those in after school programming without a recreational component, and those not in any after school programming?

2. After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

### Research Design

The researcher conducted a study intended to be quantitative and quasi-experimental in design. Chiseri-Strater and Sunstein (2006) state “American culture lends high credibility to measurement and outcomes that offer a way to identify and reward the ‘bottom line’... Quantitative methodology can advance the understanding of the many features of schooling and answer questions that can’t be answered any other way” (p.88). Limits to quantitative research do exist as Kerlinger and Lee (2000) note: (1) hypotheses are often deflected during the course of the investigation, (2) there is lack of precision in the measurement of variables, and (3) potential practical problems such as feasibility, cost, sampling, and time can occur. By using a quantitative design this study eliminated the concern of earlier studies and methodologists, as mentioned in Chapter 2, by having a control group of fourth and fifth grade students who are not enrolled in an after school program. Further, the researcher will be able to aggregate and analyze the results from Measures of Academic Progress (MAP) from the sixteen elementary schools in a rural school district in South Carolina and remain objectively separate from the subject matter due to the data being collected in the form of numbers.

## Participants

The participants for this study were fourth and fifth grade African American students enrolled in a coastal, rural, predominantly low-income and public school district in the state of South Carolina who scored below basic on state mandated end of grade tests during the 2008 test administration. Upon obtaining approval from the school district and Georgia Southern University Institutional Review Board, an initial query from the district data base was used to identify elementary African American students in grades four and five enrolled in the sixteen elementary schools during the administration of the 2008 state mandated Palmetto Achievement Challenge Test. Students who scored in the Below Basic performance level on the PACT were identified. Below Basic refers to the student not meeting minimum expectations for student performance based on the curriculum standards as set by the South Carolina Department of Education. The Educational Accountability Act (S.C. Code Ann. §59-18-500) (Supp. 1999) requires that schools develop individual Academic Plans for Students (APSs) in grades 3-8 who score Below Basic on the PACT and provide remediation to increase achievement scores in compliance with the No Child Left Behind Act of 2001.

### *Independent Variable*

Students were categorized into three groups for this study: (1) students attending after school programs for remediation purposes that include a recreational component; (2) students attending after school programs for remediation purposes that do not include a recreational component; (3) students requiring remediation but not participating in an after school program. Reasons for nonparticipation were: programming not offered at the school; parent did not agree for the student to attend; transportation concerns; and student was enrolled in organized/community sports program after the school day.

There was an unequal number of male and female students from each grade level and an unequal number of students attending after school programs and those not attending an after school program; however the variation in gender and size were not significant. After school coordinators at each site were responsible for the record of daily attendance of students, a requirement by the local school district office of federal and state grant after school programs. Attendance, for the purpose of the after school program, is a student's being enrolled in the program for a minimum of 30 days or 45 after school hours. The after school programs in the district were required to employ certified teachers providing additional instruction in reading and math at the end of the school day. The time of day varied as some of the schools are scheduled to end the school day at varied times; however, all programs were required to provide a minimum of 75 minutes beyond the school day. Choice of instructional materials varied from site to site; however, the local district recommends instruction for students to include but not be limited to, Everyday Math, Guided or Accelerated Reading and Compass Learning.

#### *Dependent Variable*

Students' scores on the Palmetto Achievement Challenge Test (PACT) were provided on the South Carolina Department of Education website (<http://www.myscschools.com>). Measure of Academic Progress (MAP) and Cognitive Abilities Test (Cog AT) Composite scores were obtained from the local school district database. Students' names were used only during the database query and sorting process. After sorting, the names were removed and replaced with a random ID number to protect student anonymity.

#### *Sample*

Non-random, convenience sampling was used in this study because it was not possible to randomly assign students to the three groups (i.e., to force certain students to attend the after

school programs). Convenience sampling is often used primarily due to availability of participants, ease of recruitment and willingness of volunteers to participate. If non-random sampling is used, technically speaking, no generalizations may be made from a convenience sample to a population (Johnson & Christensen, 1999). An a priori power analysis suggested that a total sample size of approximately 160 was necessary to achieve adequate statistical power to detect differences among three groups, assuming a medium effect size ( $f = .25$ ) and 80% power ( $\alpha = .05$ ).

#### Instrumentation

Data was compiled by the researcher after analyzing scores and levels of fourth and fifth grade low achieving African American students using three separate published instruments administered statewide as directed by the South Carolina Department of Education Office of Assessment:

1- Palmetto Achievement Challenge Test (PACT) - The PACT is a standards-based accountability measurement of student achievement in four core academic areas - English language arts (which includes reading, writing and language), mathematics, science, and social studies. The PACT items are aligned to the South Carolina academic standards developed for each discipline. An accountability system and a statewide test, such as the PACT, are mandated by the South Carolina Education Accountability Act of 1998 and the federal No Child Left Behind Act of 2001 (NCLB). The 2008 PACT reflects the standards in use during the 2007-08 school year. The three types of items on the reading portion of the PACT are multiple-choice, constructed-response, and extended-response. Two types of items were used on the mathematics portion and those were multiple-choice and constructed-response. According to the guidelines set forth in the 2002-03 South Carolina Department of Education's Blueprint for Success, the 2008

PACT test forms were created from the pool of items that had been field tested in 2007 and from previous years. Internal reviews are conducted by the contractor for alignment and quality and items are either accepted, rejected or revised. All PACT technical work is currently based on the Rasch model, in which raw scores are sufficient statistics for abilities and scale scores. For the Rasch model, performance levels are derived from scale scores which are identical to those based on raw scores. Three reliability indexes were computed for each grade level and subject test: Kuder-Richardson formula 21 (KR21) (Kuder and Richardson, 1937); coefficient alpha (Cronbach, 1951) for the total test, and coefficient alpha for the multiple choice items only. Across subjects and grades, KR21s varied from 0.827 to 0.918, while full test reliabilities ranged from 0.840 to 0.927. (South Carolina Department of Education, 2008) For the purpose of this study, PACT score levels were collected to identify students who qualified as a Below Basic, low achieving student.

2- Measure of Academic Progress (MAP) - MAP is a state-aligned computerized adaptive assessment program developed by the Northwest Evaluation Association (NWEA). The assessment provides growth and achievement data to educators for assistance in developing instructional strategies, planning school improvement, and making student-focused, data-driven decisions. As reported by NWEA (2009), more than 3400 school districts use MAP Mathematics, Reading and Language Usage test to measure academic growth over time, independent of grade level or age and measure what a student knows and needs to learn.

NWEA conducts ongoing research to ensure the results are valid and reliable by creating and maintaining accuracy in both a stable scale and test design. The measurement scale is divided into equal parts, Rasch Units (RITs), named after the test theory's founder, Georg Rasch. The RIT scale is stable, meaning the scale has stayed the same since it was first implemented over 20

years ago, is infinite but most student score fall between the values of 140 and 300 and equal-interval, meaning the distance is the same between any two sets of numbers. (NWEA, 2009) For the purpose of this research, the scores were collected and analyzed using grade percentile ranks.

3- Cognitive Abilities Test (Cog AT) (*Form 6*). Form 6 of Cog AT consists of three separate batteries that measure verbal, quantitative, and nonverbal reasoning which are areas most linked to academic success in school. (Lohman & Hagen, 2001). While Cog AT is well-suited to help educators make important student placement decisions, such as selecting students for Gifted and Talented programs, exclusive features such as the Ability Profile Score can be used to expand the educational opportunities of all students. Reasoning abilities have substantial correlations with learning and problem solving, both in and out of school. The Cog AT's measurement of three different content domains ensures that educators receive a balanced view of the child. Cognitive processing measure of ability that is fair to minority children, effective for differential diagnosis, and related to intervention, The Primary Edition of Cog AT is designed for students and scheduled to be administered when students are in the second grades in the fall of the school year. Each of the three primary batteries has 48 items. The items in each battery are divided into two subtests with different item formats. Children listen to the teacher read a question and then choose the picture that best answers the question, marking an answer directly in the test booklet. For the Verbal Battery, the subtests are Oral Vocabulary and Verbal Reasoning; for the Quantitative Battery, they are Relational Concepts and Quantitative Concepts; and for the Nonverbal Battery, they are Matrices and Figure Classification. An overall Composite Score is calculated from the scores of the Verbal, Quantitative and Nonverbal subtests. For the purpose of this research the scores were collected and analyzed using grade percentile ranks.

### Procedure

Upon approval from the doctoral committee and the Georgia Southern University Institutional Review Board (IRB), the researcher sent a letter to the South Carolina school district where the study took place to obtain permission, explain the purpose and objective of this study and assure anonymity. Data was compiled from the state and school district database to generate a report of fourth and fifth grade students who were administered the PACT during the Spring 2008 administration at each of the sixteen elementary schools. A list was generated from the database for those African American students scoring in the Below Basic level. The following criteria further guided the selection: (1) students identified as special education were omitted from the study; (2) both male and female students were selected; (3) students in all socioeconomic levels were selected. Upon approval from the district coordinator for state and federal programs, the researcher contacted each after school coordinator by telephone at the sixteen elementary schools requested confirmation of required attendance for students and to assess if the after school program was strictly academic in programming or academic with a recreational component. The list of all students, scoring Below Basic on the PACT who attended the after school program was checked against the database for the purpose of sorting students into the three groups, those students attending after school programs with and without recreational components and those students not attending any after school program. A school by school query, using the district database, was then performed to collect the Cog AT and MAP scores for the three groups of students. After retrieval of these scores, students' names were removed, coded by school and identification number, and all data retained for analysis.

### *Data Analysis*

The data obtained for the study was coded and entered into the Statistical Package for the Social Sciences (SPSS) Version 17.0. An Analysis of Covariance (ANCOVA) was used to compare student performance on the MAP across all three groups, after statistically controlling for cognitive ability. Descriptive statistics were further used to compare the student groups by grade, gender and program.

### *Reporting the Data*

The data was reported in both text and graphic format to answer the research questions. Tables containing demographic information, descriptive statistics, means and standard deviations, and results are presented in the following Chapter 4.

### Summary

The purpose of this study was to determine the impact of a rural school districts' after school programs on fourth and fifth grade student achievement in reading and math. This research study was conducted as quantitative research and the following over arching question governed this study: What is the impact of after school programming on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural community? All elementary schools in the district were included in the study. The researcher collected test scores and data using the districts' database as well as initiated personal interviews and telephone conversation to obtain information regarding the individual programs at each of the sixteen elementary schools. Chapter 4 includes a report of the data collected in both text and graphic form along with a detailed analysis of the data.

## CHAPTER 4

### REPORT OF DATA AND DATA ANALYSIS

#### Introduction

The purpose of this study was to determine the impact of after school programs on elementary school student achievement. With increased focus in public education on academic progress and accountability, the importance, improvement, and continuance of after school programs is of educational and political concern. There have been substantial changes in programming over the years reflecting societal changes as well as the impact from legislative action and educational reform. With current economic and political concerns, school administrators are refining strategies and allocation of funds to best meet the requirements of the No Child Left Behind Act (NCLB).

Use of after school programs has been one means by which school administrators have addressed student achievement and remediation especially for low achieving students. Researchers have investigated after school programs; however, this research has focused mostly on urban areas and with inconsistencies in the research methods and findings. There continues, then, to be a gap in the research for rural after school programs using quality research methods. Therefore, the researcher designed a quasi-experimental, quantitative study consisting of collecting data of fourth and fifth grade, low achieving African American students from a local public school district. Three independent instruments which assess the academic levels of elementary students were used to determine the impact of after school programs on the student achievement.

Chapter 4 includes the research questions along with a description of the research design. This chapter also contains descriptive statistics and demographic information for each of the

three groups of students involved in this study: (1) the control group of students not participating in after school programs, (2) students in after school programs with only academics, and (3) students in after school program with academics along with a recreational component. The researcher reported the various findings from the data in table, graphic and narrative format.

### Research Questions

This study addressed the following overarching research questions: What is the impact of after school programming on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural community? Further the specific sub-questions guided the research:

1. After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?
2. After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

### Research Design

The study was quantitative and quasi-experimental in design. Quantitative methodology is used in research to help understand and answer questions in the field of education that cannot be answered in any other way. By using numbers and statistics, inequity, fairness, and results are

identified objectively thereby avoiding subjectivity in reporting results. Chiseri-Strater and Sunstein (2006) state the American culture lends high credibility to measurement and outcomes, resulting with a bottom line. The bottom line can be accomplished by using quantitative methodology. The data were collected, coded and entered into SPSS for statistical chi square, analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA).

### Procedures

The researcher collected data for 419 fourth and fifth grade low achieving African American participants. In Chapter 3, an a priori power analysis was performed and suggested that a total sample size of 160 was necessary to achieve adequate statistical power to detect differences among three groups, assuming a medium effect size ( $f = .25$ ) and 80% power ( $\alpha = .05$ ). After compiling data from the South Carolina Department of Education website, the researcher was able to identify 419 African American students who scored Below Basic on the state mandated achievement test, Palmetto Achievement Challenge Test, which far exceeded the minimum required sample size. The student variables that were measured for the research were:

- Palmetto Achievement Challenge Test (PACT) Reading and Mathematics 2008 administration levels for identification of Below Basic students
- Cognitive Abilities Test Composite (Cog AT) grade percentile rank
- Measures of Academic Progress (MAP) 2008 Fall administration and 2009 Spring administration for Reading and Mathematics grade percentile rank

### Demographic Data

Table 3 gives a detailed breakdown of the demographic data for the three major research groups of students from the 419 low achieving African American elementary students identified for this research. A chi square analysis was performed to determine if the groups were

significantly uneven. Of the 419 students, 227(54.2%) were male and 192 (45.8%) were female. In terms of grade, there were 213 (50.8%) students in fourth grade and 206 (49.2%) fifth graders. The after school grouping variable showed 119 (28.4%) students were enrolled in an after school program with academics, 153 (36.5%) students were enrolled in an academic after school program which included a recreational component, and 147 (35.1%) students were not enrolled in any after school program.

Further demographics are detailed in Table 4 showing the distribution of students by gender and grade level and after school programming. For the 147 students not enrolled in any after school program, 70 (47.4%) students are in the 4<sup>th</sup> grade and 77 (52.4%) are in the 5<sup>th</sup> grade; 90 (61.2%) are males and 57 (38.8%) are females. In the academic after school program, 61 (51.3%) of the students enrolled are 4<sup>th</sup> graders while the other 58 (48.7%) are 5<sup>th</sup> graders with 56 (47.1%) males and 63 (52.9%) females. The after school academic plus recreation program has 82 (53.6%) students in the 4<sup>th</sup> grade and 71 (46.4%) students in the 5<sup>th</sup> grade; 81(52.9%) students are male and 72 (47.1%) are female.

Table 3

*Student Demographics*

Item	Frequency	Valid Percent
Gender		
Male	227	54.2
Female	192	45.8
Grade		
4 <sup>th</sup> Grade	213	50.8
5 <sup>th</sup> Grade	206	49.2
After School Grouping		
No After School Program (NAS)	147	35.1
After School Academic Program (ASA)	119	28.4
After School Academic Plus Recreation (ASA+R)	153	36.5

N=419

Table 4

*After School Grouping by Grade and Gender*


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After School Group	4 <sup>th</sup> Grade		5 <sup>th</sup> Grade	
	Male	Female	Male	Female
NAS	44	26	47	30
ASA	28	33	28	31
ASA+R	42	39	38	33
Subtotals	114	98	113	94

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N= 419

## Continuous Variables Analysis

The researcher used descriptive statistics including means and standard deviations to analyze the continuous variables for Cognitive Abilities Test (Cog AT) scores and scores from Measures of Academic Progress (MAP), Fall and Spring Administration for Reading and Math. As shown in Table 5, the lowest grade percentile score for the Cog AT was 1<sup>st</sup> percentile with the highest being the 87<sup>th</sup> percentile and a mean of 22.12. The Fall Reading MAP lowest score was 1<sup>st</sup> percentile with the highest being 76<sup>th</sup> percentile and a mean of 19.75; Spring Reading MAP lowest score was 1<sup>st</sup> percentile with 94<sup>th</sup> percentile as the high and a mean of 22.27. Fall Reading Math score was a 1<sup>st</sup> percentile for the lowest score and a high of 83<sup>rd</sup> percentile and a mean of 20.68; and a 1<sup>st</sup> percentile for the lowest score for Spring MAP with the highest score reported as a 93<sup>rd</sup> percentile and a mean of 23.91.

Table 5

*Descriptive Statistics for Cog AT and MAP*


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<u>Variables</u>	<u>N</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>	<u>Standard Deviation</u>
Cog AT Composite- Grade % Rank	419	1	87	22.12	15.167
MAP Fall 2008- Reading Grade % Rank	419	1	76	19.75	16.722
MAP Spring 2009- Reading Grade % Rank	419	1	94	23.27	18.645
MAP Fall 2008- Math Grade % Rank	419	1	83	20.68	16.592
MAP Spring 2009- Math Grade % Rank	419	1	93	23.91	18.312

---

Further, a multivariate ANCOVA was performed to analyze the Measure of Academic Performance (MAP) Fall 2008 administration scores for both the Reading and Math tests to assess if the three groups differed initially in their academic scores, prior to the after school intervention period. The Fall administration score is the initial/baseline score for all students in the school district for Measures of Academic Progress. The results revealed the Reading scores did not differ significantly by group ( $F_{2,414} = 1.88, p = .15$ ).

However, the results for the Fall Math MAP indicated the control group, the students who would not be enrolled in an after school program (NAS), did significantly better than the other

two groups who would be enrolled in an after school program ( $F_{2,414} = 10.76, p < .001$ ). Table 6 shows the means and standard deviations of each Fall testing by group.

Table 6

*Means and Standard Deviations for MAP Fall Scores for After School Groups*

Measure of Academic Progress	Group	Mean	Standard Deviation	N
Reading Fall 2008 Score Grade % ile Rank	NAS	20.73	17.073	147
	ASA	19.83	17.404	119
	ASA+R	18.75	15.872	153
Math Fall 2008 Score Grade % ile Rank	NAS	24.27	19.52	147
	ASA	19.67	14.466	119
	ASA+R	18.01	14.421	153

#### Data Analysis

Because students' reading and math scores were highly correlated, a multivariate analysis of covariance (MANCOVA) was first calculated to examine the impact of after school programs on student achievement (both reading and math combined) while controlling for cognitive ability. A multivariate main effect for group was found,

$F(4,830) = 2.83, p = .02$ . Effect sizes statistics, which reflect the proportion of variance, explained by the independent variable, are also reported using Cohen's (1988) standards

( $\eta^2$  of .01-.05 is small, .06-.13 is moderate, & .14+ is large). Effect size statistics revealed that group status represented a moderate effect size ( $\eta_p^2 = .13$ ). To determine which dependent variables (i.e., reading or math MAP scores) accounted for this group difference, follow-up

univariate ANCOVAs were then performed on each dependent variable, with calculations of partial eta-squared sizes.

The results are presented for Reading in Table 7 and answer the following question:

Question 1- After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not enrolled in any after school programming?

The results of the ANCOVA analysis examining group differences in MAP Reading scores showed that Cog AT scores were significantly related to MAP Reading scores ( $p = .005$ ) but after controlling for cognitive abilities there were no significant differences among the three student groupings found in the reading achievement,  $F(2,449) = 1.80, p = .17$ . The after school academic group and the after school academic with recreational component did show improvement; however, the control group, (no after school program), showed improvement as well in reading achievement.

Table 7

*ANCOVA Results and Descriptive Statistics for Reading Achievement*

Reading Achievement				
	Observed Mean	SD	n	
No After School Program (NAS)	5.164	14.19638	147	
After School Academics (ASA)	3.811	17.55117	119	
After School Academics+Recreation (ASA+R)	1.715	16.17309	153	

  

Source	SS	df	MS	F
Group	898.87	2	449.44	1.80
Cog AT	1952.44	1	1952.44	7.82
Error	103579.64	415	249.59	
Total	111411.00	419		

The results are presented for Math in Table 8 and answer the following question:

Research Question 2- After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary – aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not enrolled in any after school programming?

The results of the ANCOVA analysis examining group differences in MAP Math scores showed that Cog AT scores were not significantly related to MAP Math scores ( $p = .94$ ) but there were significant differences among the three student groupings found on the math achievement for the  $F_{(2,449)} = 3.23$ ,  $p = .04$ ,  $\eta_p^2 = .02$ . This group difference represents a

small effect size. Pairwise comparisons reveal that the after school academic group (ASA) and the after school academic with recreational component (ASA+R) did show significantly more improvement than did the students not enrolled in any after school program (NAS); however, the after school groups did not significantly differ from each other.

Table 8

*ANCOVA Results and Descriptive Statistics for Math Achievement*

Math Achievement				
	Observed Mean	SD	n	
No After School Program (NAS)	.889	13.02133	147	
After School Academics (ASA)	4.429	14.65801	119	
After School Academics+Recreation (ASA+R)	4.544	13.86207	153	

  

Source	SS	df	MS	F
Group	1233.18	2	616.59	3.23
Cog AT	0.94	1	0.94	0.005
Error	79315.12	415	191.12	
Total	84931.00	419		

## Findings

Outcomes data for reading achievement showed that students attending the after school programs scored no better on the Measures of Academic Progress Spring 2009 administration than their peers who did not participate.

Outcomes data for math achievement showed that students attending the after school programs scored significantly better on the Measures of Academic Progress Spring 2009 administration than their peers who did not participate. In addition, there were no statistically

significant differences between the two groups of students who did attend the after school academic programs with or without the recreational component.

### Summary

The data gathered in this study were analyzed to determine the impact of after school learning programs on rural elementary school African American student achievement. The researcher compiled and analyzed data of 419 low achieving fourth and fifth grade, African American students enrolled in a local public school district in a coastal, rural South Carolina community. Information was also gathered relating to student demographics and descriptive statistics for the Measure of Academic Progress Fall 2008 and Spring 2009 administration as well as the Cognitive Abilities Test Composite Score. Findings were presented in this chapter in text and tables. This study outlined a method of data collection that can be replicated from existing school system databases thus eliminating the need for researchers to recreate a research design and data collection method. A discussion of the practical significance and implications of the findings of this study are included in Chapter 5.

## CHAPTER 5

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

#### Summary

The Reauthorization of the Elementary and Secondary Education Act and the establishment of the Improving America's Schools Act of 1994, under the Clinton Administration, provided federal grants for after school programs across the nation. These programs, supplemented with Title I monies, were established to improve academic skills and provide a safe place for disadvantaged elementary and secondary students in an after school setting. They served as the foundation for the emphasis and focus on meeting the needs of children across the nation. The purpose of these grants, established by Congress, was to enable school districts and/or communities with rural, urban and inner city public schools to develop activities and projects to enhance the educational, recreational and social levels of the students and subsequently improve the community. Further, the need for such programs was necessitated by fewer parents being at home after school to supervise children.

According to Barton (2004), "Achievement gaps by race/ethnicity and income mirror inequalities in those aspects of schooling, early life, and home circumstances that research has linked to school achievement."(p. 9) From the Emancipation Proclamation issued by President Lincoln in 1863, to the War on Poverty with President Johnson in 1963, to the Reforming and Strengthening America's Schools for the 21<sup>st</sup> Century of President Obama in 2009, societies' inequalities and achievement gaps have been a political and economic concern for nearly two centuries. The task at hand for public school administrators, in keeping with current economic and political concerns, is to refine academic strategies and allocations of funds to best meet the requirements of President Bush's No Child Left Behind Act (NCLB). Implementation of after

school programs has been one approach by which school administrators have addressed student achievement and remediation especially for low achieving students.

The intent of the researcher was to determine the impact of after school learning programs on student achievement in reading and math for low achieving African American students enrolled in a rural, coastal public school district in South Carolina. Improving the educational outcomes for students who are at risk and meeting adequate yearly progress goals is an important issue for public school administrators. Therefore, the results of this study on the impact of the after school programs are important to the decision making of administrators as they make decisions on the continuation and selection of programs.

#### Analysis of Findings

To gather data for this study, the researcher accessed students' scores on the Palmetto Achievement Challenge Test (PACT) provided on the South Carolina Department of Education website for the purpose of identification of participants. Fourth and fifth grade, African American students scoring Below Basic on the Reading and Math section of the PACT were chosen for the study. Further, the researcher aggregated the results for the 419 identified students for Measures of Academic Progress (MAP) and Cognitive Abilities Test (Cog AT) from the local public school database using a school by school query. The list of all students, scoring Below Basic on the PACT who attended the after school program was checked against the database for the purpose of sorting students into the three groups, those students attending after school programs with and without recreational components and those students not attending any after school program. After retrieval of those scores, students' names were removed to protect anonymity, coded by school and identification number, and all data retained for analysis.

This study addressed the following overarching research question: What is the impact of after school programming on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural public school district? Further, specific sub-questions guided the research:

1. After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?
2. After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

A total of 419 participants were identified for the study. Analysis of the data was completed using quantitative methods and the Statistical Package for Social Sciences (SPSS) Version 17.0 computer program. Analyses included descriptive statistics for the continuous variables, chi square analyses of the after school grouping independent variables, and univariate and multivariate analyses of covariance. The findings of the study are discussed as both research questions are addressed in this chapter.

#### Discussion of Research Findings

Sub-question one: After statistically controlling for cognitive ability, will significant differences on the Reading section of Measures of Academic Progress exist among elementary-

aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

The intent in researching this question was to determine if the reading achievement scores of students attending either of the after school programs would be different from the reading achievement scores of students not attending an after school program. The results from the study revealed the MAP Reading scores, after controlling for cognitive abilities, did not differ significantly among the three student groupings. The after school academic group and the after school academic with recreational component group did show improvement; however, the control group (no after school program) showed improvement as well. The review of the literature relating to elementary after school students' reading achievement is mixed in results.

In a longitudinal study, Vandell and Posner (1999), examined the after school activities of third, fourth and fifth grade African American and White children and reported the children who attended after school programs and spent more time on academic and extracurricular activities were associated with better academic grades and work habits and better emotional adjustment in school. Klein and Bolus (2002) found statistically significant improvements in reading between pretest and posttest for approximately 500 students in elementary grades 1-5 enrolled in the Foundations After School Enrichment Program in urban and rural areas of Pennsylvania, New Jersey and Florida. Specifically, they found those students to be keeping pace with the national norm group in reading. The Harvard Family Research Project conducted a major longitudinal after school study and found "greater participation was significantly related to positive achievement on standardized test of mathematics, reading, and language arts when the influence of gender, ethnicity, income, and language status was controlled for" (p.16). The Chicago's

Lighthouse Program, assisted 40 schools in improving their test scores (Smith et al., 2001). The results of the study for the program, *When Time Matters: Examining the Impact and Distribution of Extra Instructional Time*, showed that the after school students made a one month gain in reading over students who did not attend the after school program. An Evaluation of the South Carolina 21<sup>st</sup> Century Learning Center Program was completed and prepared for the South Carolina State Department of Education in April of 2007 reported no significant relationships were found between the difference in PACT scores and whether the site was located in a rural or urban setting but did find that those students attending after school programs met or exceeded the state standard in reading by almost 5% compared to the students who did not attend.

Findings in support of this researcher's study, but in contrast to the aforementioned studies, consist of one of the most highly supported national studies, *When Schools Stay Open Late: The National Evaluation of the 21<sup>st</sup> Century Community Learning Centers Program*. Researchers evaluated the federal government funded after school programs and found the after school program group students, as compared to the control group, did not show improvement in their reading test scores. Additional data reported in 2004, with an increase from the 1,000 elementary students identified in the initial study, again showed students attending after school programs scored no better on reading tests than their nonparticipating peers. Further in support of this researcher's findings is the largest to date study from Mid-continent Research for Education and Learning (McREL). In the area of reading, for upper elementary after school students, the compiled results of the 53 studies, showed those students experienced the smallest affect which reflected a loss in percentile points. As far as strategies that involved strictly academic or academic and social, the outcomes for reading was the academic and social activity

school programs did not have a statistically significant impact on reading achievement for the upper elementary after school students.

Subquestion two: After statistically controlling for cognitive ability, will significant differences on the Math section of Measures of Academic Progress exist among elementary-aged, low achieving, African American students in after school programming with a recreational component, those in after school programming without a recreational component, and those not in any after school programming?

Based on the reported data in Chapter 4, the results of the ANCOVA analysis examining group differences in MAP Math scores showed that Cog AT scores were not significantly related to MAP Math scores but there were significant differences among the three student groupings in math achievement. The after school academic group and the after school academic with recreational component group did show significantly more improvement than did the students not enrolled in any after school program; however, the after school groups did not significantly differ from each other.

As with the literature review and previous research for after school program and reading achievement, the same holds true for math achievement, the findings are mixed. In support of the findings for this study is a longitudinal study by Vandell and Posner (2007). The longitudinal study on academic effectiveness of 35 after school programs (19 of which were elementary) in 8 states (6 rural areas within those states) found the elementary school students who regularly attended the high quality academic after school programs, alone or in combination with recreational activities, across two years demonstrated significant gains in standardized math test scores compared to their peers who were not enrolled in after school programs. Similarly, the New York TASC program researchers found that among the elementary and middle school

participants, the average change in math test scores was 1.4 standardized scale points more than the predicted scores. The University of Chicago conducted a three-year evaluation of the Chicago's Public School's Community School Initiative (CSI) which included after school programming. Results revealed the standardized test scores for a large sample of students who participated in the after school programming in 2006 and for the performance area in math, 63.8% of the students tested met or exceeded the Illinois state performance standards but these data were not exclusive to after school students but for all students in the overall cohort of CSI schools (Whalen, 2007). Both studies from Vandell et al. reported in the research review report significant gains in standardized math test scores of after school students compared to their peers who were not involved in programs during the after school hours as did Klein & Bolus(2002); LA's BEST (2000); Chicago's Lighthouse Program, When Time Matters (Smith et al., 2001); YS-CARE (2002). A specific study relating to math achievement and elementary after school students also supports this researcher's findings. The 2008 study contracted by the U.S. Department of Education with Manpower Demonstration Research Corporation (MDRC) included 3 rural schools in the total of 25 schools, from 13 states, chosen for the study. The Stanford Achievement Test, Tenth Edition (SAT 10) abbreviated battery for math was given as a pretest and posttest to elementary students at least one grade level behind in math and enrolled in two after school math programs. The results showed improved math achievement for both after school groups; however, the students enrolled in the enhanced math academic after school program showed statistically significant growth as compared to the students in the regular after school program. The same was not true for the after school reading programs of which there was no statistically significant difference in the groups for reading. In contrast, these findings are not supported by the April 2007 report, An Evaluation of the South Carolina 21<sup>st</sup> Century Learning

Center Program. The study reported those scores for students attending after school programs decreased for math achievement by 2.6% in the number that met or exceeded the state standard. Research conducted by Mathematica Policy Research and 21<sup>st</sup> Century Community Learning Centers (2001) does not support the findings that after school programs are needed to foster elementary student achievement. The results of their research showed elementary students who participated in after school programs did not perform any better on standardized testing than nonparticipants.

### Conclusions

The results from the analysis of the research lead to the following conclusions regarding the impact of after school learning centers on student achievement for a sample of elementary-aged, low achieving, African American students in a coastal rural public school district:

1. Cognitive Abilities Test scores were significantly related to Measure of Academic Progress Reading scores.
2. After controlling for cognitive abilities, there were no significant differences in reading among the three student groupings, students enrolled in an academic after school program, students enrolled in an academic after school program with recreation, and students not enrolled in an after school program.
3. Cognitive Abilities Test scores were not significantly related to Measure of Academic Progress Math scores.
4. After controlling for cognitive abilities, there were significant differences in math among the three student groupings, students enrolled in an academic after school program, students enrolled in an academic after school program with recreation, and students not enrolled in an after school program.

### Implications

It is the hope of this researcher that the data from this study may be used to assist the local public school administrators to make informed educational and financial decisions regarding the continuance of after school programs in assisting low achieving students. The results also assist in meeting the call for meaningful research in the field of after school studies. This study outlined a method of data collection that can be replicated from existing school system databases thus eliminating the need for researchers to recreate a new research design and data collection method. Clearly, there are numerous studies in the field of after school programming; however, there remains a significant gap in the educational literature regarding rural, elementary after school programs. With an increased emphasis on adequate yearly progress for all public schools and meeting the academic needs of all students with increased emphasis on minority student achievement gap, it is imperative for school administrators to assess and understand the impact of after school programming, with or without a recreational component, on student achievement. In this age of accountability, improving educational outcomes for low achieving students is an educational and societal concern.

### Dissemination

At present, nationwide after school programs are funded by the federal government at \$1.08 billion, which is approximately one thousand dollars per child and is issued through state grants to help educate low achieving students. Local and state school system officials, policy makers, classroom teachers, after school teachers, and researchers in the field of after school programs would benefit from the review of the findings of this study. As requested by the local school district office coordinator of federal and state programs, this researcher will share the results of this study in an effort to assess what is working and what is not with the after school

programs in the district in an attempt to make improvements. Also the researcher intends to develop a presentation for the South Carolina After School Alliance annual meeting, held during the 2009-2010 school year, as well as pursue possible journal publication in collaboration with the committee methodologist.

### Recommendations for Future Research

The following recommendations are made based upon the findings in this study:

1. This study was limited to one rural, coastal, public school district. Further study could be conducted to include other districts in the region.
2. This study was limited to fourth and fifth grade African American students.
3. Further research could be conducted to consider other racial and ethnic composition as well as other grade levels.
4. Further research could be conducted as a longitudinal study with the 419 participants included in this research study.
5. Further research is needed to explore why there was not a link between the Cognitive Abilities Test and the Math Measures of Academic Progress.
6. Revision of the after school academic reading component.

### Concluding Thoughts

From the first after school program, established in 1889 at The Hull House, in Chicago's Nineteenth Ward, to the current after school programs established across the nation some 120 years later, the goal has been unchanged. These programs were established to improve academic skills and provide a safe place for disadvantaged elementary and secondary students in an after school setting. More recently, federal and state grants were established by Congress to enable school districts to develop activities and projects to enhance the educational, recreational, and

social levels of the students and subsequently improve the community. With the 2001 implementation of NCLB, current education policy has become increasingly controlled by legislative action which has intensified the focus on academic progress with emphasis on low achieving students and schools and accountability by administrators in those public schools.

The purpose of this research was to examine the impact of rural after school learning centers on elementary student achievement in reading and math. The utilization of after school programs has been one avenue by which school administrators address student achievement and there is the need to be aware of the effectiveness of those programs to ensure the best intervention for low achieving students thereby closing the achievement gap for poor and minority students.

The researcher's findings indicate that students enrolled in an after school program, whether the program was strictly academic or academic with a recreational component, scored statistically significantly higher in math achievement than students not enrolled in an after school program. In reading achievement, all students involved in the study showed an increase whether enrolled in an after school program or a nonparticipant of an after school program. Finally, many policy decisions are made at levels other than school levels in this local school district in South Carolina. Administrators, since they are held for accountability, should be encouraged by the local school districts to research and find out specifically if the after school program provided by their school has helped to increase the test scores for low achieving and minority students in the subject areas of math and reading. More knowledge and data collection will help the administrator better decide what is needed educationally, recreationally and socially for the children served in their school as well as better prepare teachers and inform parents.

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