The effects of an after-school program: Changing academic performance and promoting success

By

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Since the enactment of the *No Child Left Behind Act* of 2001, students who failed to demonstrate proficiency on state assessments were identified and targeted in order to receive interventions to assist in increasing their academic achievement. For many students, time during the regular school day simply could not be provided for the attention or time on-task necessary to meet their needs. As a result, many school districts and schools implemented after-school and tutoring programs to target those students who failed to demonstrate proficiency.

Louisville Municipal School District (LMSD) operated an after-school program to help increase the academic achievement of 5th through 8th grade students in reading/language and mathematics on the MCT2. The purpose of this study was to (a) explore the impact the after-school program’s strategic components (leadership, activities, and partnerships) had on student achievement, and (b) determine if the after-school program had a positive effect on academic outcomes in the areas of reading/language and mathematics.
A mixed method research design was used to conduct the study. A narrative approach was used to provide a response to the first research question. The Chi-squared test of independence was used as the primary means of analysis for the second and third research questions to determine if relationship existed between participation in the after-school program and academic achievement.

The results from the research study show that strategic components of an after-school program had a positive impact on student achievement. Emerging themes were identified for each strategic component: leadership, activities, and partnerships. Participation in the after-school program proved to be a good predictor of student achievement on MCT2, with statistically significant Chi-squared results for reading/language.

The recommendations for future research are as follows: (a) further research to improve reading/language and mathematics skills among the nation’s students, (b) longitudinal studies to determine long term effects on students attending after-school programs multiple years, (c) study of effects of after-school programs on other grade levels, and (d) including outcomes of other variables such as after-school participation on school attendance, behavior, and classroom grades.

Key words: after-school programs, structural components, student participation, student achievement
DEDICATION

This research paper is dedicated to my children, Laura Beth and Kady Rose. You inspire me each day. Your support has encouraged me to pursue my dream. Thank you girls for your patience, understanding, thoughtfulness, encouragement, and most importantly, unconditional love.

This research paper is also dedicated to my husband, parents, sisters, grandmother, and special friends. To my husband, thank you for your support and understanding that has allowed me to achieve my goal. To my parents, you have instilled in me the importance of education and the desire to achieve my goals. Mamaw Helen, for your continual support and words of encouragement, thank you! To my special friends, your faith in me will never be forgotten.

This could not have happened without all of your faith, support and constant encouragement. Thank you for teaching me to believe in myself, in God, and in my dreams.
First and foremost, I acknowledge God who is my Lord and Savior. Without his assistance, I never would have been able to pursue my dream of completing my doctorate of philosophy. Secondly, I acknowledge the members of my dissertation committee, Dr. Frankie Williams, Dr. Teresa Jayroe, Dr. David Morse, and Dr. Jack Blendinger for your never-ending assistance. Lastly, I acknowledge and express my heartfelt gratitude to my dissertation chair and co-chair, Dr. Frankie Williams and Dr. Teresa Jayroe, for their dedication of many hours and weekends to assist me in this great work.
# TABLE OF CONTENTS

DEDICATION.................................................................................................................... ii

ACKNOWLEDGEMENTS............................................................................................... iii

LIST OF TABLES............................................................................................................. vi

LIST OF FIGURES ......................................................................................................... viii

CHAPTER

## I. INTRODUCTION .............................................................................................1

Statement of the Problem...................................................................................4
Purpose of the Study .................................................................................8
Research Questions ..................................................................................9
Significance of the Study .........................................................................10
Delimitations .........................................................................................11
Definition of Terms ...............................................................................11
Operational Definitions .......................................................................12
Conceptual Framework of the Study ....................................................12
Organization of the Study .................................................................14

## II. REVIEW OF LITERATURE ..........................................................................15

History of After-school Program Instruction .........................18
Enrichment Activities ..................................................................19
Federal Mandates ...........................................................................21
Need for After-school Programs ..................................................23
Partnerships ......................................................................................25
After-school Programs in Mississippi .......................................26
Characteristics of Quality After-school Programs ................27
Impact of After-school Programs ..................................................28
Theoretical Framework .................................................................37
Chapter Summary .............................................................................44

## III. METHODOLOGY ..........................................................................................46

Institutional Review Board Approval ..............................................46
Research Design..............................................................................47
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Percentage of LMSD Students Scoring Below Proficiency in Reading/Language on MCT2</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>Percentage of LMSD Students Scoring Below Proficiency in Mathematics on MCT2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Emergent Themes of Structural Components</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 5</td>
<td>67</td>
</tr>
<tr>
<td>5</td>
<td>Chi-squared Test: Grade 5 Reading/Language Year 2</td>
<td>68</td>
</tr>
<tr>
<td>6</td>
<td>Chi-squared Test: Grade 5 Reading/Language Year 3</td>
<td>69</td>
</tr>
<tr>
<td>7</td>
<td>Chi-squared Test: Grade 5 Reading/Language Year 4</td>
<td>69</td>
</tr>
<tr>
<td>8</td>
<td>Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 6</td>
<td>71</td>
</tr>
<tr>
<td>9</td>
<td>Chi-squared Test: Grade 6 Reading/Language Year 2</td>
<td>72</td>
</tr>
<tr>
<td>10</td>
<td>Chi-squared Test: Grade 6 Reading/Language Year 3</td>
<td>73</td>
</tr>
<tr>
<td>11</td>
<td>Chi-squared Test: Grade 6 Reading/Language Year 4</td>
<td>74</td>
</tr>
<tr>
<td>12</td>
<td>Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 7</td>
<td>75</td>
</tr>
<tr>
<td>13</td>
<td>Chi-squared Test: Grade 7 Reading/Language Year 2</td>
<td>76</td>
</tr>
<tr>
<td>14</td>
<td>Chi-squared Test: Grade 7 Reading/Language Year 3</td>
<td>76</td>
</tr>
<tr>
<td>15</td>
<td>Chi-squared Test: Grade 7 Reading/Language Year 4</td>
<td>77</td>
</tr>
<tr>
<td>16</td>
<td>Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 8</td>
<td>78</td>
</tr>
<tr>
<td>17</td>
<td>Chi-squared Test: Grade 8 Reading/Language Year 2</td>
<td>79</td>
</tr>
</tbody>
</table>
LIST OF FIGURES

1  Conceptual Framework of the Study ............................................................. 13
CHAPTER I
INTRODUCTION

The accountability of schools has been a driving factor after the No Child Left Behind Act (NCLB, 2002). Since this law was passed in 2001, schools across the country have felt the pressure of meeting the standards set forth in NCLB. NCLB required states to create and implement a state accountability system that emphasized and measured student academic performance. The goal of the state accountability system was to help states monitor the progress of their students towards meeting the proficiency standards in reading and mathematics by the 2013-2014 academic school year.

A significant requirement of each state’s accountability system to meet NCLB requirements was that states must measure and monitor their yearly progress towards meeting the proficiency standard. This requirement is referred to in the NCLB Act as Adequate Yearly Progress (AYP). According to the law, school districts and schools within districts, must demonstrate that their schools are making adequate progress towards all students being proficient by the 2013-2014 academic school year.

Since the enactment of NCLB, students who failed to demonstrate proficiency on state assessments were identified and targeted in order to receive interventions to assist in increasing their academic achievement (Shaul & Ganson, 2005). For many students, time during the regular school day simply could not be provided for the attention or time on-task necessary to meet their needs (Grigsby, Schumacher, Decman, & Simieou, 2010).
As a result, many school districts and schools implemented after-school and tutoring programs to target those students who failed to demonstrate proficiency and to offer enrichment to those who have leveled in their achievement (United States Department of Education [USDE], 2000).

In addition to school districts and schools utilizing after-school programs to meet the requirements outlined in the NCLB legislation, these programs offered other benefits as well (After-school Alliance, 2013). A recent report conducted by the After-school Alliance (2013) showed that more than 15.1 million school-aged children were alone and unsupervised in the hours after school. The report noted that after-school programs provide means to keep kids safe, engage children in enriching activities, and give piece of mind to parents and/or caregivers during the out-of-school hours. After-school programs have been operating for decades in communities across the country, and federal investment in after-school programs has increased dramatically since the mid-1990s (USDE, 2013).

In 1988, approximately 22% of K-8 principals surveyed reported that their schools offered after-school programs, and by 2001, 66% of principals reported having after-school programs in place (Huang et al., 2008). Further, other scholars reported that more than 75% of principals of public schools that offer after-school programs reported it was "extremely important" for schools to maintain their extended-day programs (Kleiner, Nolin, & Chapman, 2001). The focus of many of the after-school programs included tutoring and enrichment activities, however, many have shifted from general enrichment activities (including social and physical) during the earlier years to more academically-focused activities.
The federal government has been a major supporter of after-school programs. Funding for after-school programs by the federal government increased from $40 million in fiscal year 1998 to $850 million in fiscal year 2002 (USDE, 2003). During 2003, federal investment supported roughly about 7,500 rural and inner-city public schools in more than 1,400 communities. The After-school Alliance (2013) reported there were approximately 8.4 million school-age children in after-school programs during 2012. For the fiscal year 2014, the USDE appropriated $1.1 billion for 21st Century Community Learning Centers (21st CCLC), a major after-school program (After-school Alliance, 2013).

Several studies have found that after-school programs have positive effects on children's academic performance as well as on other factors. Most notably, a study on after-school programs across the country was conducted by the USDE in 1998 and found student-achievement gains in school districts in New York, Illinois, New Hampshire, Louisiana, California, Texas, and Tennessee (Brickman, 1996; Brooks, & Mojica, 1995; Chicago Public Schools, 1998; Gregory, 1996; Louisiana Department of Education, 1996; McLennan Youth Collaboration Inc., 1997; Ross, Lewis, Smith & Sterbin, 1996). Moreover, cities in Texas, New York, and Maryland reported substantial decreases in juvenile crime after the inception of various after-school programs (Baltimore Police Department, 1998; McLennan Youth Collaboration Inc., 1997; Schinke, Orlandi, & Cole, 1992).

In general, constant streams of after-school program evaluations have shown important gains for students, in terms of academic achievement and also in terms of safety, discipline, attendance, and avoidance of risky behaviors (After-school Alliance,
2009). Evaluations from a study conducted by the Center for Evaluation and Education Policy (2012) demonstrated that students who needed to improve academically did so and regularly made improvements over the course of the school year. In addition, researchers found that after-school programs encouraged increased parental involvement, which is an important building block for student success (Wahlstrom, Sheldon, & Murphy, 2004).

**Statement of the Problem**

Educators are continually searching for programs, strategies, and techniques that will enhance student achievement. A major goal of NCLB is that all students should be proficient in reading and mathematics by 2014 (NCLB, 2002). The USDE’s National Assessment of Educational Progress (NAEP) has long examined the academic achievement of America’s students and continues to provide data to determine proficiency levels of students (Klein, 2006). Mandated and authorized by the U.S. Congress in 1969, the NAEP has presented nationally representative assessments of American students’ academic achievement in the content areas of reading, writing, mathematics, science, and history/geography (Klein, 2006).

NAEP uses three achievement levels to describe the academic performance of America’s students: basic, proficient, and advanced (Viaero, 2005). The basic level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade assessed. The proficient level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate
to the subject matter. The advanced level signifies superior performance at each grade
assessed (Olson, 2006).

According to the NAEP (2013), the most recent assessment results indicated that
many of the nation’s students are at risk for not meeting the proficiency standard. The
results of the 2013 NAEP assessment indicated that more than half of America’s fourth
and eighth graders are not proficient in math or reading. Only 50% of fourth graders and
44% of eighth graders scored in the proficient or advanced range on the math assessment
and only 33% of fourth and 40% of eighth grade students scored in the proficient or
advanced range on the reading assessment (NAEP, 2013).

While the levels of academic achievement in the nation were reported as less than
optimal, achievement levels for students enrolled in schools in the state of Mississippi
were reported far more disturbing. The NAEP data for Mississippi continued to rank
among the lowest - performing states in terms of student achievement. In 2013, 74% of
fourth graders in Mississippi who completed the NAEP assessments failed to score in the
proficient or advanced range in math and 79% in reading (NAEP, 2013). When eighth
grade scores were examined, similar results were observed. The 2013 data showed that
80% of eighth graders scored below proficient in reading and 79% scored below
proficient in math. On the reading assessment, 47% of fourth graders and 36% of eighth
graders scored below basic. On the math assessment, 26% of fourth graders and 39% of
eighth graders scored below basic (NAEP, 2013). As evidenced by these findings, large-
scale improvements in student achievement for the nation in general and Mississippi
specifically are warranted.
In addition to the NAEP data, state accountability data also showed low performance among students enrolled in school districts across the state of Mississippi (Mississippi Department of Education, 2009). Louisville Municipal School District (LMSD), which is a rural district in Winston County, Mississippi, is comprised of six schools. These schools include Louisville High School (Grades 9-12), Eiland Middle School (Grades 6-8), Louisville Elementary School (Grades 3-5), Fair Elementary School (Grades Pre-K–2), Nanih Waiya Attendance Center (Grades K-12), and Noxapater Attendance Center (Grades K-12). During the 2008-2009 school year, based on the Mississippi Curriculum Test, Second Edition (MCT2) scores, MDE issued one school in the district an accountability level of High Performing; one school was deemed Successful; two schools were on Academic Watch; and one school was deemed At Risk of Failing. One school did not receive an accountability rating since it was comprised of kindergarten through third grade. The overall district’s accreditation level, which was Academic Watch, depicted the need for improvement in student academic achievement as evidenced by the MCT2 scores. Low MCT2 scores indicated that a vast number of students in the LMSD needed academic remediation.

Table 1 provides a display of MCT2 reading/language data for LMSD students for 2009-2013. In general, students did not score well in reading/language.
Table 1

*Percentage of LMSD Students Scoring Below Proficiency in Reading/Language on MCT2*

<table>
<thead>
<tr>
<th>School Year</th>
<th>5</th>
<th>6</th>
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<th>8</th>
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<tbody>
<tr>
<td>2008-09</td>
<td>58%</td>
<td>47%</td>
<td>53%</td>
<td>55%</td>
</tr>
<tr>
<td>2009-10</td>
<td>45%</td>
<td>52%</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>2010-11</td>
<td>60%</td>
<td>46%</td>
<td>52%</td>
<td>46%</td>
</tr>
<tr>
<td>2011-12</td>
<td>57%</td>
<td>54%</td>
<td>48%</td>
<td>49%</td>
</tr>
<tr>
<td>2012-13</td>
<td>47%</td>
<td>52%</td>
<td>49%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Table 2 provides a display of MCT2 mathematics data for LMSD students for 2009-2013. As indicated, students did not score well in mathematics on the MCT2.

Table 2

*Percentage of LMSD Students Scoring Below Proficiency in Mathematics on MCT2*

<table>
<thead>
<tr>
<th>School Year</th>
<th>5</th>
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<tbody>
<tr>
<td>2008-09</td>
<td>44%</td>
<td>49%</td>
<td>46%</td>
<td>53%</td>
</tr>
<tr>
<td>2009-10</td>
<td>36%</td>
<td>51%</td>
<td>41%</td>
<td>44%</td>
</tr>
<tr>
<td>2010-11</td>
<td>45%</td>
<td>48%</td>
<td>43%</td>
<td>38%</td>
</tr>
<tr>
<td>2011-12</td>
<td>47%</td>
<td>50%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>2012-13</td>
<td>30%</td>
<td>44%</td>
<td>36%</td>
<td>32%</td>
</tr>
</tbody>
</table>

In an effort to address the needs of students in the LMSD, personnel incorporated various intervention strategies and programs into their daily school schedules. In an attempt to increase student achievement and to ensure that students were making adequate yearly progress, the LMSD administrators and teachers recognized additional
time outside of the regular school day was needed. Accordingly, an after-school program, 21st CCLC, was planned and implemented to assist in improving student achievement.

The popularity of after-school programs has increased throughout the nation. Part of the increase in the availability of after-school programs is correlated with the increase in the number of employed single parent families and the number of families with two parents in the labor force (After-school Alliance, 2013). In which case, part of the increase is attributed to the need to provide safe environments for students in the hours from the end of the school day and until the time when most parents return home from work (After-school Alliance, 2003). However, in this era of high stakes testing, most of the increase in the availability of after-school programs can be attributed to school districts throughout the nation searching for means of increasing student academic achievement.

While the availability of after-school programs has clearly increased, the efficacy of the programs continues to be debatable at best and untested in certain situations, as is in the case of the LMSD’s after-school program (Witt, 2004). Although the program has been in operation for four years, little empirical data have been analyzed to determine the effectiveness of the after-school program in terms of increasing participating students’ academic achievement. In which case, this study served as a formal assessment of the program for the LMSD.

**Purpose of the Study**

The purpose of this study was to investigate the effects of a specific 21st CCLC after-school program on student achievement. The major goal of this study was to explore
the impact the after-school program’s strategic components (leadership, activities, and partnerships) had on student achievement. Further, the study sought to determine if the after-school program for the LMSD had a positive effect on academic outcomes in the areas of reading and mathematics of students who participated in the after-school program when compared to the academic outcomes of students who did not participate in the after-school program.

More specifically, the purpose of this study was to examine the effects of regular participation in a 21st CCLC after-school program on the academic achievement of students in a rural school district in Mississippi. This study focused on objective one of the 21st CCLC program as cited in the 21st CCLC Non-Regulatory Guidance (USDE, 2003). The first objective of 21st CCLC program is for students “to demonstrate educational and social benefits and exhibit positive behavioral changes” (USDE, 2003 p. 32). The objective for the specific after-school program was for each student who regularly participated in the after-school program to meet or exceed state and local academic achievement standards in reading and mathematics.

By exploring strategic components (leadership, activities, and partnerships) of the 21st CCLC program, this study provides implications for insights that could be used to promote and assist 21st CCLC after-school funded programs in Mississippi as well as throughout the country. In addition, this study provides useful insights for those planning and implementing an after-school funded program.

**Research Questions**

As a means of fulfilling this study, the following research questions guided the study:
1) How do the strategic components (leadership, goals, activities, and partnerships) of an after-school program impact student achievement?

2) What effect does participation in an after-school program have on reading achievement scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

3) What effect does participation in an after-school program have on mathematics achievement scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

**Significance of the Study**

As stated earlier, this study served as a formal research assessment of the after-school program for the LMSD. This study is significant in that the results of the study may be used to help school and district administrators make well informed decisions relating to the efficacy of using the after-school program to increase students’ academic achievement.

This study extends the body of knowledge with regards to after-school programs. Not only did the literature report conflicting results with respect to positive, negative, and null findings (After-school Alliance, 2013) of the effectiveness of after-school programs, but there was also little research that focused on students attending economically disadvantaged schools in small, rural communities, or more specifically, in the state of Mississippi. The results of this study add to the body of knowledge concerning these specific population attributes.
**Delimitations**

The criteria for participants for this study were students enrolled in Grades 5-8 in the LMSD during the academic years 2010-11, 2011-12, and 2012-13. Two student groups were utilized for each academic year. One group consisted of students who participated in the after-school program. The other group consisted of students who met the criteria to participate in the after-school program; but chose not to participate. While the after-school program also provides services for students in Grades 9-12, due to low participation for these grades, these data were not included in this study. The descriptions of the structural strategies were confined to those of the LMSD.

**Definition of Terms**

The following definitions provide clarification for important terminology utilized through this research study. Terms that are technical in nature, subject to multiple interpretations and/or unique to this study are defined below:

Constitutive Definitions

An *after-school program* is any organized program which invites youth to participate outside of the traditional school day (Jenner & Jenner, 2007).

*Mississippi Curriculum Test, Second Edition (MCT2)* is a criterion-referenced test that measures a student’s performance against criteria, learning objectives, and performance standards for the domain (MDE, 2007).

*Socio-economic Status (SES)* is an economic and sociological combined total measure of a person's work experience and of an individual's or family’s economic and social position in relation to others, based on income, education, and occupation.
Academic Achievement is the outcome of education — the extent to which a student has achieved their educational goals (Shernoff, 2010).

Operational Definitions

The Changing Academic Performance and Promoting Success (CAPPs) After-school Program serves students identified as being academically at risk (based on classroom grades and state assessment scores) or economically disadvantaged (based on free-reduced lunch status). Students are tutored on specific objectives identified by their regular classroom teacher. The CAPPs staff and the regular school day staff collaborate weekly to identify areas where remediation and interventions are needed for the CAPPs students.

CAPPs hours of operation are Monday–Thursday for 2 hours and 15 minutes each day during the academic year (15 weeks in the fall and 15 weeks in the spring). During the month of June, CAPPs serves students for 20 days for four hours each day.

Academic achievement or academic performance is the proficiency level attained on the MCT2. From lowest to highest, the proficiency levels are Minimal, Basic, Proficient, and Advanced.

Socio-economic Status is based on student’s free or reduced lunch status.

Regular Student Participation in CAPPs requires students attend at least 30 days during the CAPPs year which includes 20 days during the summer.

Conceptual Framework of the Study

Figure 1 provides a visual display of the conceptual framework of the study. Components included documents from the after-school program, structural program
aspects, students’ scores who participated in the program, and students’ scores who did not participate in the program.

Documents (evaluation reports, student achievement data, personnel information, etc.) related to the after-school program were reviewed for analysis. The focus was placed on structural program strategies including leadership, activities, and partnerships. Student achievement data were investigated for the students who participated in CAPPS as well as for the students who did not participate in the program. The student achievement data included MCT2 proficiency levels on mathematics and reading.
Organization of the Study

The study is organized into five chapters. The first chapter provided an introduction to the study. This chapter included (a) statement of the problem, (b) purpose of the study, (c) research questions, (d) significance of the study, (e) delimitations, (f) definition of terms, and (g) a conceptual framework for the study.

Chapter II includes a review of the related literature focusing on (a) history of after-school program instruction, (b) enrichment activities, (c) federal mandates, (d) need for after-school programs, (e) partnerships, (f) after-school programs in Mississippi, (g) quality after-school programs, and (h) impact of after-school programs.

Chapter III contains a discussion of the methodology used in the study. The study consists of a mixed research design. Included in this chapter are descriptors of the background information, setting, data collection procedures, and the method of data analysis used to determine research findings and conclusions.

Chapter IV presents the findings obtained through data collection. Data for research question one are qualitative and presented in a narrative format. Data for research questions two and three are quantitative and presented in terms of statistical significance.

Chapter V includes discussion and implications drawn from the study and recommendations for further research.
CHAPTER II
REVIEW OF LITERATURE

This chapter provides a review of the literature related to the impact of after-school programs on student achievement. This chapter begins with an overview of after-school programs. Further, the chapter provides related literature on (a) the history of after-school program instruction, (b) the importance for enrichment activities, (c) federal mandates, (d) the need for after-school programs, (e) the importance of after-school partnerships, (f) an overview of after-school programs in Mississippi, (g) issues with classification of quality after-school programs, and (h) the impact of after-school programs. The Chapter concludes with supporting theories to help explain the nature of after-school programs.

In 2001, Congress passed NCLB, which not only reiterated America’s displeasure with the level of academic achievement among its students, but also stipulated a significant mandate for schools receiving federal funds (USDE, 2007). According to Olson (2006), schools that wish to receive continuous support through federal funding should ensure that all students are proficient in reading and mathematics by 2014. Consequently, multiple avenues were developed to help districts fulfill NCLB’s proficiency mandate.

During the last forty years, the American public education system has seen a variety of innovative programs aimed at enhancing the education of today’s youths.
From publicized data presented by *A Nation at Risk* in the 1980s to No Child Left Behind (NCLB) legislation in the 2000s, the American educational system has been under great scrutiny as leaders work not only to improve the system but also to mandate who receives federal dollars and how those dollars can best be spent to ensure all students reach proficiency in math and reading (Pastchal-Temple, 2012).

One program designed as a part of NCLB to assist failing schools is the use of Supplemental Educational Services (SES). Designed to be held outside the regular school day and supplement the curriculum, SES, using scientifically based research, has resulted in many schools adopting after-school programs supported by Title I funds. In addition, NCLB requires school districts to spend between 5-20% of their Title I funds on SES (Lauer et al., 2006). As a result, many schools have employed after-school programs as their SES. The 21st CCLC program is one particular type of after-school program that is often utilized in conjunction with SES.

This initiative, designed as part of the Improving America’s School Act of 1994, allows school districts to support existing curriculums and enhance the education of students by providing additional learning opportunities (USDE, 2010). The purpose of the 21st CCLC program was to “provide funding to school districts to support continuing education and lifelong learning opportunities to children and adults to keep the country’s workforce competitive for the 21st century” (Un 2010, p. 2). The 21st CCLC program was amended and reauthorized as part of the NCLB Act (NCLB, 2002). The 21st CCLC program supports the creation of community learning centers that provide academic enrichment opportunities during non-school hours for children, particularly students who attend high-poverty and low-performing schools. In addition to helping students meet
state and local student standards in core academic subjects, such as reading and math, the 21st CCLC program offer students a broad array of enrichment activities that can complement their regular academic programs. They also offer literacy and other educational services to the families of participating children. (p.1)

Major support for after-school programs thereby extending learning time to increase student achievement has been demonstrated through the funding of 21st Century Schools in Title IV, Part B, commonly referred to as 21st CCLC Grants (Chappell, 2006; USDE, 1998). Since 1998, the USDE has awarded states the 21st CCLC grants to enhance student achievement. The MDE receives 21st CCLC funding and sends out a request for proposals. The 21st CCLC grants are awarded on a competitive basis, to public and/or private organizations. The agencies and organizations eligible under the 21st CCLC program “include, but are not limited to: non-profit agencies, city and county government agencies, faith based organizations, institutions of higher education, and for-profit corporations.” An “eligible” entity means a local educational agency (LEA), school, community-based organization, another public or private entity, or a consortium of two or more of such agencies, organizations, or entities. The statute encourages eligible organizations to collaborate with local education agencies (LEAs) when applying for (USDE, 1998).

The 21st CCLC initiative is the only federal funding source dedicated exclusively to after-school programs along with before-school and summer learning programs (After-school Alliance, 2009c). Each state education agency receives funds based on its share of Title I funding for low-income students. The 21st CCLC programs provide the following services to students attending high-poverty, low-performing schools: (a) academic
enrichment opportunities for children and their families; (b) a safe environment for students when school is not in session; and (c) a range of high-quality services to support student learning and development that include tutoring and mentoring, community service opportunities, music, arts, sports, and cultural activities (Penuel, McGhee, & SRI, International, 2010). The proposed study seeks to determine the impact and effects of a specific 21st CCLC after-school initiative in a local school district.

**History of After-school Program Instruction**

One of the oldest forms of instruction in an after-school program is the process of tutoring. Wagner (1990) traced the origins of peer tutoring in the western civilization back to Greece in the 1st Century A.D. through Rome, Germany, other parts of Europe, and finally to America. Rippa (1997) described tutors of early America as teachers who drilled the sons of the aristocratic planters of the southern colonists in Latin grammar, arithmetic, English, and Euclidean geometry. Tutors were also used in the form of apprenticeships for children, especially poor or orphaned, to learn a trade. Our present formal education system evolved from these two early forms of tutoring that were used throughout Europe and other eastern civilizations before the 1600s.

One problem with establishing education in the new country was the plantations in the southern colonies. These plantations were so far apart it was hard to establish schools for the children of the plantation owners; therefore, tutors became a vital part of the education of these children. Another problem in establishing education in the new country was the education of orphans, poor children, and illegitimate children.

These children did not have families to be responsible for their education or training; therefore, the application of apprenticeships was widely utilized to educate these
children. The apprenticeships required the child to work, train, and serve a master in order to learn a trade. The master served as a type of tutor, training the child in skills of a trade that the child would use later to earn a living.

The long history of education reveals that parents and/or caregivers have often provided one-to-one instruction in the form of tutoring and in various learning settings from driving instruction to help for children who were having difficulties in school. Tutoring is often used in remedial programs and in special education as a way to help struggling students. Tutoring became a common activity in after-school programs (Wasik, Bond, & Hindman, 2002). The development of private tutoring agencies such as Sylvan Learning Centers, Young Men's Christian Association (YMCA), and Gateway increased the hiring of private tutors for students who need extra help (Wasik et al., 1990). Wasik et al. (2002) added that with the limited resources of public schools many after-school tutoring programs often rely on community volunteers and college students to work with struggling students.

Implementation of a successful tutoring program involves a significant amount of work and commitment from all who work in the program, including the school organization, which is providing the tutoring. The America Reads Challenge Act of 1997, as cited in Adler (1999), provided a component that utilizes tutors to work with students who are at risk for failing in reading and writing. In 2001, President Bush requested Congress to provide funds for after-school programs for struggling children in reading.

**Enrichment Activities**

Enrichment activities expand on students' learning in ways that differ from the methods used during the school day (Eyre & Marjoram, 1990). They often are interactive
and project-focused. They enhance a student's education by bringing new concepts to light or by using old concepts in new ways. These activities are fun for the students, but they also impart knowledge. They allow the participants to apply knowledge and skills stressed in school to real-life experiences (Wahlstrom, Sheldon, & Murphy, 2004).

Four of five surveyed teachers (83%) agreed that even when students are struggling, electives are necessary and give students something to look forward to as essential to a well-rounded education (Gregory, 1996). However, time dedicated to the arts is lacking in schools (Center on Education Policy, 2007). Of elementary schools that offered music education, 7% offered it less than once a week and of schools that offered visual arts, 15% offered it less than once a week (Parsad & Spiegelman, 2011). More than 4 in 10 elementary schools offered dance (47%) and drama/theater (42%) less than once a week (Parsad & Spiegelman, 2011).

Students in schools serving predominantly low-income households receive less arts instruction than students in schools serving higher-income households (Parsad & Spiegelman, 2012). Arts learning opportunities are also less likely to be available in elementary schools that serve predominantly students who are from low-income households (Swiatek & Benbow, 1991). Music education is also less likely to be offered at a school serving a high number of low-income students (Parsad & Spiegelman, 2012).

Enrichment programs for students offer experiences not provided to them in the regular classroom setting (Miller & Gentry, 2010). Students can be provided with fast-paced learning, in-depth knowledge of accelerated content, and the opportunity to work on independent projects (Olszewski-Kubilius, 2003). In addition to their academics, students in enrichment programs have opportunities to make new friends and collaborate
with peers who have similar intellectual levels (Olszewski-Kubilius, 2003). Olszewski-Kubilius (1989) suggested that students receive academic and social benefits from enrichment programs such as social support from teachers, counselors, and intellectual peers; positive attitudes toward learning; acquisition of study skills; independence, if the program is residential; and exposure to college life and attainment of knowledge about various university-level programs. In addition, enrichment programs can positively influence students’ attitudes toward certain content areas including math (Swiatek & Benbow, 1991) and science (Stake & Mares, 2001).

After-school programs promote school achievement and build life skills while utilizing enrichment activities (Olszewski-Kubilius, 2003). Children who spend time in enrichment activities have better grades, better work habits and more positive relationships with their peers (Nellie Mae Education Foundation, 2003). After-school programs give children the opportunity to develop creative thinking, problem-solving, communication and self-direction skills that are linked with success in the workplace (Corporate Voices for Working Families, 2006).

**Federal Mandates**

Venable (1982) stated that the public’s concern with education’s failure to effectively provide basic reading and mathematics skills had intensified. In recent years, national concerns focused on school accountability and led to the implementation of NCLB (2002). NCLB (2002) was structured to provide funding and supplementary services to 21st CCLC to provide after-school tutoring in virtually every public school across America. 21st CCLCs became a part of the federal initiative that provides funds
for school programs to help struggling students in after-school tutoring programs and summer school programs.

NCLB (2002) is the landmark decision that led Congress to reauthorize ESEA (2002). ESEA was the federal law that provided guidelines for education in kindergarten through high school (USDE, 2004). NCLB (2002) and ESEA (2002) have four common characteristics: (a) accountability for results, (b) emphasis on scientific research, (c) expanded parental options, and (d) more expanded local control and flexibility. NCLB (2002) has set the goal that every child will be on grade level as measured by state devised educational standards by the end of the 2013–2014 school year (USDE, 2004).


Furthermore, Reid (2004) stated that NCLB (2002) requires states to review tutoring providers after two years, but the survey completed at the time revealed that very few states had completed the required analyses. Evaluation of established tutoring programs has not been consistent across the United States. Many private programs use their own testing evaluations and many public schools are using state performance testing in their evaluations. Reid (2004) concluded by stating the USDE would consider establishing a common evaluation system for all schools and private tutoring providers.
Need for After-school Programs

More than 15.1 million school-age children (26%) are on their own after-school. Among them, more than one million are in Grades K-5 (After-school Alliance, 2009). More than 27 million parents of school-age children are employed, including 23 million who work full time (Snyder & Dillow, 2012). Only 8.4 million K-12 children (15%) participate in after-school programs. An additional 18.5 million would participate if a quality program were available in their community (After-school Alliance, 2009b). According to Learning Point Associates (2013) 1.7 million children and youth were served by a 21st CCLC program in the United States. The hours between 3 p.m. and 6 p.m., are the peak hours for juvenile crime and experimentation with drugs, alcohol, cigarettes and sex (After-school Corp, 1998). During the summer months, first time use of alcohol, tobacco, and drugs peak among kids ages 12 to 17 (Substance Abuse and Mental Health Services Administration, 2012). Eight in ten Americans want all children and teens to have some type of organized activity or safe place to go after-school (Miller, O’Connor, Sirignano, & Joshi, 1996).

A nationally representative parent study, conducted by the National Center for Education Statistics (NCES) looked at after-school arrangements and found that 40% of children in eighth grade or under were in formal non-parental care arrangements at least once a week. The three most commonly used after-school arrangements were center- or school-based care (20% of all kindergarteners through eighth graders), care by a relative (15%), and self-care (12%); some children were in more than one arrangement (Carver, Chapman, & Iruka, 2005). For these reasons, parents overwhelmingly supported after-school programs and wanted to see more after-school opportunities for students and
increased funding for programs (Christensen, Schneider, & Butler, 2011). As public demand and need for after-school programs have grown, so too has the demand for accountability of after-school programs (Wahlstrom et al., 2004). After-school Alliance (2009b) noted this is particularly true for after-school programs that utilize public dollars pointing out that where tax dollars flow, so must accountability to taxpayers.

A 2011 National After-school Association/Champions survey found that 82% of school superintendents from across the country agreed that after-school programs were important. Further, a 2008 election eve poll revealed that 3 in 4 voters believed after-school programs are “an absolute necessity” for their communities (After-school Alliance, 2013). According to a 2004 public agenda survey, low-income and minority parents are much more likely than higher-income and White parents to say they have trouble finding high-quality, convenient and affordable activities for their children.

Nearly 83% of National School Board Association members surveyed in 2003 asserted that it is essential or very important that after-school programs are maintained in their district. Another election eve poll conducted by the After-school Alliance in 2012 found that 92% of working mothers believed that after-school programs are “very important” given that children in after-school programs are less likely to engage in risky behaviors, such as criminal activity and drug or alcohol use.

The need for after-school programs is evident; however, expansion of these programs was found in the literature to be somewhat problematic. The main issue facing expansion of after-school programs is funding (After-school Alliance, 2009b). Current funding levels do not come close to meeting the nationwide demand. Over 15 million students are eligible to attend 21st CCLC programs nationally, but funding allows for
only 1.6 million students to participate (Llagas, 2003). There are an additional 18.5 million children in the United States whose parents would enroll them in after school programs if requests for funding were awarded. Over the last 10 years, $4 billion in local grant requests were denied because of the lack of adequate federal funding and intense competition (Learning Point Associates, 2012). The federal government contributes only 11% of the cost of after-school, while 29% of children in after-school meet the federal government’s definition of low-income and in need of federal assistance (Wolfe, 2009). Between 2006 and 2010, partner organizations contributed more than $1 billion to support 21st CCLC programs. In 2010, the average contribution was $67,000 per partner (Forbes, 2013).

**Partnerships**

After-school partnerships with higher education and community partnerships are the cornerstone of some of the most successful after-school programs (After-school Alliance, 2007, Anderson-Butcher, 2004; USDE, 2000). For example, reports showed that the average after-school program funded by a 21st CCLC grant leverages resources through relationships with at least six local organizations (After-school Alliance, 2007; USDE, 2000). Higher education institutions are one of the most frequent partners (Anderson-Butcher, 2004).

Many experts recognize the natural motivation and mutual benefits for universities to partner with schools and programs serving school age youth. The extant literature shows that after-school and higher education institutions, from state universities to community colleges, bring valuable resources to after-school programs (MacIsaac, Tichenor, & Heins, 2002). They can bolster students’ aspirations for higher education
and help prepare them for college. Norguera (1998) found that higher education institutions partner with after-school programs in a number of ways including providing college students as tutors, mentors or activity leaders; offering training, technical assistance and specialized services to after-school program staff and participants; and contributing to the emerging knowledge base of the field by evaluating after-school programs.

**After-school Programs in Mississippi**

A powerful convergence of factors, including a lack of federal, state and local funding, and families and communities working with tight budgets, leaves approximately 130,700 of Mississippi’s school-age children alone and unsupervised in the hours after-school (After-school Alliance, 2013). After-school programs are essential to keep kids safe, engage children in enriching activities, and give peace of mind to working moms and dads during the out-of-school hours. After-school Alliance (2013) reported approximately 265,000 kids in Mississippi would participate in an after-school program if one were available to them. There are approximately 58,000 school-age children in after-school programs in Mississippi (After-school Alliance, 2013). This includes approximately 14,400 kids who attend 21st CCLC—programs that serve children living in high-poverty areas and attending low-performing schools (After-school Alliance, 2013). At a time when families and communities are struggling financially and kids are falling behind academically, after-school programs are needed more than ever (After-school Alliance, 2013). If the 21st CCLC initiative were funded at the fully authorized level, the Mississippi share would be $33,338,058 for Fiscal Year (FY) 2013. The current
amount appropriated is $14,433,678. If full funding for 21st CCLC were available, 60 additional grants in Mississippi could be awarded (After-school Alliance, 2013).

**Characteristics of Quality After-school Programs**

Existing literature lacks a definite definition of the elements of an after-school program. Rather than defining the term based on content, researchers tend to distinguish after-school programs by content area and/or goals. (Aplser, 2009). For example, while Hofferth (1991) and Alexander (2000) grouped programs by specific goals of the program, Fashola (1998) grouped after-school programs by specific academic content areas addressed during the program (Pastchal-Temple, 2012). According to Alexander (2000), after-school programs are often designed to address at least one of the following goals: (a) providing adult supervision and safe environment; (b) providing an authentic home environment; (c) providing culture and enrichment opportunities; (d) improving academic performance; (e) preventing discipline problems; and (f) providing recreational activities. After-school programs that address one of the goals provide students greater opportunities to excel academically (Pastchal-Temple, 2012).

The 21st CCLC initiative is the only federal funding source dedicated exclusively to before-school, after-school and summer learning programs. After-school programs provide the following services to students attending high-poverty, low-performing schools: academic enrichment activities that help students meet state and local achievement standards; a broad array of additional services designed to reinforce and complement the regular academic program; and literacy and related educational development services to the families of children who are served in the program (USDE, 2013).
Impact of After-school Programs

From the literature pertaining to after-school programs a few key themes are clear. Prior research focused on after-school programs’ impact on academic achievement in reading and mathematics, impact on narrowing the achievement gap, impact on attendance and behavior, and impact on university-school partnerships. Quality after-school programs had a positive impact on student academic achievement. After-school programs had a strong impact in reading (Lauer et al., 2006). Educators perceived more practice, provided in after-school settings, generated greater reading success and improvement (Nelson-Royes, & Reglin, 2011). When students attended after-school programs, their reading ability improved on measureable objectives throughout the course of the year. Students increased at least one grade level in reading on the Automated Readability Index (ARI) test (Saddler, & Staulters, 2008). After-school programs allow students to engage in independent reading that is individually interesting and challenging (Little, & Hines, 2006). Consistent attendance in after-school programs improved reading levels (Nelson-Royes, & Reglin, 2011).

Wisconsin’s 21st CCLCs after-school program evaluation was completed in August of 2010 (Wahlstrom, Sheldon, & Murphy, 2010). The evaluation consisted of the 44,483 students who participated in 174 21st CCLCs in Wisconsin during the 2008-09 school year. Teachers of students participating in 21st CCLC programs in Wisconsin reported that 69% of regular program attendees increased their academic performance with 42% increasing their grades in language arts from the first grading period to the end of the school year (Wahlstrom et al., 2010).
Students exposed to consistent well-delivered literacy strategies in after-school settings were more likely to experience greater reading gains (Sheldon, Arbreton, Hopkins, & Grossman, 2010). Researchers observed that when staff-to-student ratios are small, learning has a higher rate of success (Carswell, Hanlon, O'Grady, Watts, & Pothong, 2009). In addition, research shows that the quality of after-school experiences may be a stronger predictor of academic performance than quantity of experience in after-school programs (Shernoff, 2010).

Teaching quality was found to be the single most important factor influencing student achievement (Apsler, 2009). Time and again, the bottom line of many after-school studies is that one of the most critical features of high-quality programs necessary for achieving positive outcomes is the quality of a program’s staff (Beck, 1999). A follow-up study of The After School Corporation (TASC) evaluation found that specific staff practices lent themselves to the development of positive relationships between staff and youth. Looking across program sites for middle school students, evaluators found that positive relationships were found in sites where staff (a) modeled positive behavior, (b) actively promoted student mastery of skills or concepts presented in activities, (c) listened attentively to participants, (d) frequently provided individualized feedback and guidance during activities, and (e) established clear expectations for mature, respectful peer interactions (Grossman, Campbell, & Raley, 2007).

For students participating in the after-school programs, most mathematics results were positive and significant (Zimmer, Hamilton, & Christina, 2009). Students who attended after-school programs had higher mathematics achievement as evidenced by an increase in semester grades (Baker, Rieg, & Clendaniel, 2006). After-school students
were able to work independently and successfully perform in their math classes during the regular school day (Hock, Pulvers, Deshler, & Schumaker, 2001). After-school students appeared superior to non-after-school students in mathematics (Sheley, 1984). Researchers at Manpower Demonstration Research Corporation (MDRC) found that as little as 45 minutes of focused academic instruction during after-school, using specially created materials, resulted in a statistically significant increase in students’ math scores (Black, Doolittle, Zhu, Unterman, Grossman, & Institute of Education Sciences, 2008).

An evaluation of the Texas 21st CCLC after-school program was conducted in August, 2009. The Texas 21st CCLC program was evaluated for the 2007-08 academic year. Results showed the youth who attended math-focused activities as part of the Texas 21st CCLC program were significantly more likely to pass the math portion of the Texas Assessment of Knowledge and Skills as compared to those who did not attend math-focused activities (Wahlstrom et al., 2004).

Boys and minority girls whose parents reported they usually went to an after-school program had higher levels of physical activity compared with those who usually went home after-school (Ross, Dowda, Colabianchi, Saunders, & Pate, 2012). Minority girls who went to an after-school program participated in five fewer minutes per hour of sedentary behavior during the hours after-school, compared to the minority girls who went home (Ross et al., 2012). A study measuring the health and social benefits of after-school programs found that controlling for baseline obesity, poverty status, and race and ethnicity, the prevalence of obesity was significantly lower for after-school program participants (21%) compared to nonparticipants (33%) (Mahoney, Lord, & Carryl, 2005).
After-school experiences for minority students can help make connections for students who struggle with meeting school proficiency requirements (Brass, 2008). Researchers at Johns Hopkins University concluded that two-thirds of the achievement gap between lower and higher-income youth results from unequal access to summer learning opportunities (Cech, 2007). African-American children were found to be twice as likely to attend after-school programs as White children (Aguilar & Krasny, 2011; Hynes & Sanders, 2011). More than 4.1 million, or 61%, of African-American parents who were not enrolled in an afterschool program responded they would enroll their children in a quality afterschool programs if one were available (After-school Alliance, 2009b). The demand for summer learning programs is even greater. More than three in four African-American kids would likely enroll in a summer learning program, based on parent interest (After-school Alliance, 2009b).

Demand for after-school programs is great in the Hispanic community (After-school Alliance, 2009a). Hispanic children are more likely than non-Hispanic children to be enrolled in an after-school program (Greenberg, 2012). Greenberg reported 15% of Hispanic children are in after-school programs at schools, community centers, churches, or elsewhere. Twenty-two percent of Hispanic children have no adult supervision after school, and care for themselves during the afternoon hours (After-school Alliance, 2009a). The top three reasons that Hispanic parents cite for deciding which program to enroll their children in were: affordability (73%); convenient location (71%); and whether children enjoy the program (70%). Forty-four percent of Hispanic parents say they would enroll their children in after-school programs if they were available (Llagas, 2003).
Working mothers of adolescent children are more likely to enroll their children in after-school tutoring programs (Lopoo, 2007). National data suggest that middle school-age children of working mothers are much more likely to be in self-care and less likely to be in supervised arrangements than younger school-age children (Capizzano, Tout, & Adams, 2000). While only 10% of these children 10 to 12 year-olds attend after-school programs as a primary arrangement, 24% spend more of their time home alone than in any other setting (Capizzano et al., 2000). More than one third of children in this age group spend some time caring for themselves each week as either a primary or secondary arrangement. This proportion increases with age: 23% of 10-year-olds spend some time caring for themselves compared to 44% of 12-year-olds (Capizzano et al., 2000). These figures, based on data from the National Survey of American Families, probably underestimate the true number of children in self-care with working mothers in this country. Parents are often reluctant to report that their child is home alone (Mulhall & Stone, 1996).

Quality after-school programs have a positive impact on student attitudes and school attendance. Attending after-school programs was associated with better grades and conduct in school as well as better peer relations and emotional adjustment (Pierce, Bolt, & Vandell, 2010). Research by the Texas State Education Agency (2008) found that strong participation in 21st CCLC after-school programs correlated with better attendance during the regular school day. Specifically, they found that approximately half (48%) of youth who participated in three quarters or more of the available 21st CCLC activities missed five or fewer days of school during the fall semester, compared to 17% of youth who participated in less than one quarter of the available activities (After-school
Incentives to attend after-school programs were found to increase students’ success rates (Carswell, Hanlon, O'Grady, Watts, & Pothong, 2009). Other research studies have also shown a positive impact of after-school programs on regular school attendance. A five-phase evaluation of the Citizen Schools program found that former participants of the 8th Grade Academy consistently continued to attend school more often through ninth, tenth, and eleventh grade compared to a group of matched nonparticipants. This was true among all participants with low and high levels of exposure to the program (Penuel, McGhee, & SRI International, 2010). Findings showed that absences among students who participated in a North Carolina Young Scholars’ program decreased by 48% (Day, 2007). Pathways to Progress students in St. Paul, Minnesota experienced dramatically better school attendance—participants attended 18.4 more school days than non-participants (Wahlstrom et al., 2004).

Hall’s (2007) study of Chicago’s After-school Matters program found that students who participated in the program missed fewer days of school than their classmates and that students who participated most frequently failed fewer core academic courses (English, Math, Science and Social Studies). The finding is particularly noteworthy because the program was aimed at improving academics. By creating an incentive for students to attend school regularly and giving them something to look forward to after-school, researchers concluded that After-school Matters helped improve academic performance (George, Cusick, Wasserman, & Gladden, 2007).

Prior research found a positive link between proactive aggression and disciplinary actions and a negative link between reactive aggression and disciplinary actions over time (Fite, et al., 2011). Results indicated that children who attended the after-school
programs at greater rates were more likely to decrease behavior problems and increase their social competence relative to children who attended after-school fewer days (Riggs, 2006). Many youth need after-school protection from the danger of the street (Sanderson & Richards, 2010). Teens who did not participate in after-school programs were nearly three times more likely to skip classes than teens who did participate in after-school programs. They were also three times more likely to use marijuana or other drugs and were more likely to drink, smoke and engage in sexual activity (Dodd & Bowen, 2011).

Prior research indicated that satisfaction with after-school programs was associated with positive school attributions and partially mediated the effects of the perception that the program was perceived as a safe and supportive environment and a place that helps with homework (Watts, Witt, & King, 2008). Research identified six factors that are vital for a successful after-school program: both structure and autonomous space are provided, academic achievement is supported, the program is culturally consistent, there is a large core of committed authoritative adults, the leadership is child-centered, and it is a safe place (Beck, 1999).

Higher education institutions, from state universities to community colleges, bring valuable resources to after-school programs. They can bolster students’ aspirations for higher education and help prepare them for college. Higher education institutions partner with after-school programs in a number of ways by (a) providing college students as tutors, mentors or activity leaders; (b) offering training, technical assistance and specialized services to after-school program staff and participants; and (c) contributing to the emerging knowledge base of the field by evaluating after-school programs (Noguera, 1998).
The benefits of after-school partnerships with higher education extend beyond the immediate advancement of the students enrolled in after-school. Such partnerships also benefit the education field and the after-school providers looking for talented, experienced staff. Breakthrough Collaborative, a program that serves underprivileged youth, hires high school and college students to teach at their summer program. Although many of the youth staffs are not considering careers in education when they begin the summer program, by the end of the program, more than 72% say they plan to pursue a career in education (Wilson-Ahlstrom & Yohalem, 2007).

The university-school partnership is beneficial to college students as well. College students who volunteered in after-school programs were more likely to have a higher grade point average (GPA) and an increased knowledge-base (Astin & Sax, 1998). Studies suggested that college students who volunteered in after-school programs devoted more time to homework and studying and graduated from college feeling better prepared for the workforce (Phillips Brooks House Association, 2001). College students received many of the same life skills benefits as the after-school participant’s receive (Herrera, Sipe, McClanahan, & Public/Private Ventures, 2000).

Partnerships reinforce a positive working relationship with the local schools and district. The benefits of after-school partnerships with higher education extend beyond the immediate advancement of the students enrolled in after-school. Such partnerships also benefit the education field and the after-school field of providers looking for talented, experienced staff (Grossman, Campbell, & Raley, 2007). College students are the second largest category of staff in after-school programs after teachers (Learning Point Associates, 2006). Tutoring provides a valuable field experience for university
students (Baker, Rieg, & Clendaniel, 2006). These collaborations develop more educated after-school educators. The partnerships help train after-school workers with a background to be able to provide a more quality after-school experience for students (Mahoney, Levine, & Hinga, 2010). Establishing strong caregiver relationships is likely to influence youth participation in program activities and ultimately contribute to overall program success (Carswell, Hanlon, O'Grady, Watts, & Pothong, 2009).

Partnerships between after-school programs and higher education have the unique advantage of providing youth programs with relatable mentors and role models whose presence increases youth participation and satisfaction. A recent study suggested that relationships between and among after-school staff and students play an integral role in quality programming, and that hiring a strong staff is one of the ways in which program managers can improve their programs (Grossman et al., 2007). College students are often passionate about what they are doing and enjoy working closely with children (Wilson-Ahlstrom & Yohalem, 2007). Most youth cite the after-school program staff as the most important factor in why they continue to attend after-school programs (Phillips Brooks House Association, 2001). Youth mentors have been shown to have a lot of enthusiasm and engage in activities that are of interest to their students (Herrera et al., 2000). Studies reveal that youth feel special when older peers are interested in them (Phillip Brooks House Association, 2001).

Partnerships between after-school programs and higher education institutions can contribute to the success of an after-school program and its students. After-school participants, staff, schools, college volunteers and youth workers are all potential benefactors of a successful partnership.
Theoretical Framework

After-school programs are structural changes made to the traditional school day and can have a profound impact on student achievement (Granger, 2010). After-school programs are viewed as one way to bridge the gap between the end of the school day and the time parents and/or caregivers get home. Structurally, after-school programs have emerged as a strategy to improve student achievement and lower student involvement in risky behaviors (Wahlstrom et al., 2004). The emerging research on after-school program quality featured elements such as appropriate leadership and structure, well-prepared staff, intentional programming with appropriate activities, and strong partnerships (After-school Alliance, 2013).

Given the nature of after-school programs as educational organizations, a theory of change for the study of after-school programs as described by Vandell et al. (2005) is an ideal framework used for helping to understand the structural aspects (leadership, activities, and partnerships) and outcome effects (reading and mathematics achievement scores) of the after-school program at the LMSD. Vandell et al. explained that their framework for assessing change is used by a committed team of program partners, including the program leader and staff who meet regularly to refine and customize a program to fit the needs of the participants. The framework for assessing change is a progression of thinking and planning that guides a team towards setting program goals and designing program elements that can result in positive participant outcomes.

The framework for assessing change is also useful for evaluation planning, continuous learning and improvement, and effective communication among diverse program partners. A critical feature of developing change in after-school programs is to
engage local after-school partners, including the program leaders and staff, program participants, their families, and other community members and organizations, in the planning, development, and implementation process. Steps in developing a framework and assessing change brought about through means of after-school programs include the following (Vandell et al., 2005).

1. Draw a logic model. A logic model summarizes the key elements of a program, identifies the rationale behind the elements, articulates desired short- and long-term outcomes and how they can be measured, and shows the cause-and effect relationships between a program and its desired outcomes.

2. Identify program goals and strategies to meet the needs of the participants. Educators utilize a variety of theories and strategies to facilitate learning and student achievement.

3. Determine program elements needed to achieve the program goals. This step addresses how programming may be adjusted to align with identified goals?

4. Align participant outcomes with the program goals and elements. New programs need time to mature before they can begin to assess outcomes. Collect information on program implementation can help assess who is being served, how frequently they are attending, and what activities the program is offering. This information can be used to hone in on specific performance outcome measures.
The framework for change cites both institutional and structural features for high-quality activities that will lead to student achievement. The steps outlined by Vandell et al. (2005) are used to provide the format for the descriptive analysis of the specific after-school program offered in the LMSD. The four steps outlining a framework for assessing change advocated by Vandell et al. (2005) are used to organize the narrative in order to help explain the findings of the study for the LMSD after-school program. In addition to Vandell et al.’s (2005) framework of assessing change, this study leaned on Gagné’s theory of conditions of learning and Bandura's Social Learning theory to help explain the nature of the activities to address the goals. The setting was a school-based after-school program. The target population was students in Grades 5-8.

Gagné’s Conditions of Learning theory stipulates that there are several different types or levels of learning (Gagné, 1962). The significance of these classifications is that each different type requires different types of instruction. Gagné identified five major categories of learning: verbal information, intellectual skills, cognitive strategies, motor skills and attitudes. Different internal and external conditions are necessary for each type of learning (Gagné, 1985).

Gagné suggested that learning tasks for intellectual skills can be organized in a hierarchy according to complexity: stimulus recognition, response generation, procedure following, use of terminology, discriminations, concept formation, rule application, and problem solving (Gagné, 1962). The primary significance of the hierarchy is to identify prerequisites that should be completed to facilitate learning at each level. Prerequisites are identified by doing a task analysis of a learning/training task. Learning hierarchies provide a basis for the sequencing of instruction (Gagné, 1985).
In addition, Gagné’s theory outlines nine instructional events and corresponding cognitive processes: (a) gaining attention (reception), (b) informing learners of the objective (expectancy), (c) stimulating recall of prior learning (retrieval), (d) presenting the stimulus (selective perception), (e) providing learning guidance (semantic encoding), (f) eliciting performance (responding), (g) providing feedback (reinforcement), (h) assessing performance (retrieval), and (i) enhancing retention and transfer (generalization; Gagné, 1987). These events should satisfy or provide the necessary conditions for learning and serve as the basis for designing instruction and selecting appropriate media (Gagné, Briggs & Wager, 1992) and are used to explain the activities of the after-school program in the LMSD.

Gagné’s Conditions of Learning theory is based on four principles: different instruction is required for different learning outcomes; events of learning operate on the learner in ways that constitute the conditions of learning; the specific operations that constitute instructional events are different for each different type of learning outcome; and learning hierarchies define what intellectual skills are to be learned and a sequence of instruction (Gagné & Driscoll, 1988). Gagné addresses evaluation of instruction in his theory. Questions that should be addressed are as follows: (a) Have the objectives been met? (b) Is the new program better than the previous one? and (c) What additional effects does the new program include? The purpose of the evaluation is to supply data on feasibility and efficiency to develop and improve the course (Gagné, 1987). The evaluation is concerned with the effectiveness of the course or program regarding the student’s performance. Based on the student’s performance, measures are taken of the
kind of student capabilities the program is intended to establish (Gagné & Driscoll, 1988).

This study utilized Gagné’s Conditions of Learning in regards to tutorial strategies provided through the after-school program. Differentiated instruction strategies were utilized recognizing students differ in intellectual skills, cognitive strategies, motor skills and attitudes. In planning the differentiated instructional tutoring strategies, Gagné’s principles are used. Different internal and external conditions are necessary for each type of learning

Bandura's Social Learning theory explains people learn through observing others’ behavior, attitudes, and outcomes of those behaviors (Bandura, 1977). Bandura (1997) stated, “Most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action.” Social learning theory explains human behavior in terms of continuous reciprocal interaction between cognitive, behavioral, and environmental influences (Bandura & Walters, 1963).

Bandura stipulated four necessary conditions for effective modeling: (a) Attention—various factors increase or decrease the amount of attention paid, (b) Retention—remembering what you paid attention to, (c) Reproduction—reproducing the image, and (d) Motivation—having a good reason to imitate (Bandura, 1969). Bandura considered personality as an interaction between three components: the environment, behavior, and one’s psychological processes (one’s ability to entertain images in minds and language; Bandura, 1986).
This study utilized Bandura’s Social Learning theory to help explain the purpose of providing enrichment activities to students in the after-school program. Enrichment activities allowed students to learn through observing others. Staff in the after-school program utilized effective modeling strategies that gained the students’ attention; allowed for students’ retention of knowledge; allowed students’ reproduction of content; and motivate students to achieve.

Entrenched in a framework for change to further help understand the effects of the after-school program is strategic programming fused with strategic leadership which underpin the importance of envisioning, engaging, articulating, implementing, and monitoring change (Covey, 1997).

In *A Guide to Developing Exemplary Practices in After-school Programs* (Hall & Piha, 2006) explained that leadership is the key that makes after-school programs reach their potential. Marzano, Waters, and McNulty (2005) also indicated that leadership is critical to the success of an organization. Marzano et al. argued that an effective leader is the single most influential person because this person sets the tone of the organization, the climate for working, and the level of professionalism and morale of the employees. The strategic leader involves people from diverse backgrounds, interests, and experiences when he/she creates an after-school program. The strategic leader manages staff in ways that produce the best results, builds relationships with staff, families, and children, and keep people at the center of attention.

Kotter (1990), Hesselbein (2002), and Covey (1991) proposed that organizations progress when the leader has a clear vision, align people with the vision, and inspire
people to make the vision happen even when there are obstacles. These researchers also said that leaders engage others, build teams, and create opportunities for success.

Hall and Piha (2006) argued that educational leaders should keep the organization focused and moving forward. They believe this is accomplished when high expectations are established, meaningful goals are created, and strategies are developed to achieve the goals. Moving an after-school program to reach its potential requires leaders to continually assess the progress of their program, hold everyone accountable for what happens, and develop an environment that supports and inspires the after-school staff. Capable leaders think strategically, work collaboratively, and lead intentionally.

After-school program leaders who think strategically look at the big picture, think with the end in mind, and seek new and better ways to do things. School leaders who look at the big picture or vision create a focus, have an agenda, and are concerned with the outcome. This visionary leader works with their staff to create and communicate a picture of the organization at its ideal best and defines the process and strategies needed to translate that picture into concrete action. When this leader articulates the vision, it grabs the attention of their staff, enables them to get on the bandwagon builds their confidence, and instills the belief that they can perform the necessary acts to achieve the vision (Hall & Piha, 2006).

In order to achieve the vision, school leaders think with the end in mind by identifying the goals for the after-school program. Covey (1991) believed effective goals are those which focus primarily on results. Goals should identify where an organization is and where it wants to go, unify the organization’s efforts and energy, and give meaning and purpose to the work accomplished. When members of an organization understand the
goals, they know how to achieve them and are aware when they have reached them. Through innovation, school leaders seek new and better ways to do things to accomplish the organization’s goals.

According to Wheatley (1992), innovation is fostered by information gathered from new connections, insights, and networks. When school leaders explore ideas through different channels, this ensures they do not overlook important information that will help the after-school program achieve its goals.

**Chapter Summary**

Prior research has shown major support from educational leaders, teachers, parents, community partners, and students for after-school programs which extend learning time for students. After-school programs are supported with hopes of increasing student achievement. Prior studies have focused on after-school programs’ impact on academic achievement in reading and mathematics, impact on narrowing the achievement gap, impact on attendance and behavior, and impact on university-school partnerships. The research has shown a constant stream of after-school program evaluations demonstrating gains for students, in terms of academic achievement.

For educational leaders, teachers, parents, community partners, and students in Mississippi, a powerful convergence of factors, including a lack of federal, state, and local funding, and families and communities working with tight budgets, leaves approximately 130,700 of Mississippi’s school-age children alone and unsupervised in the hours after school (After-school Alliance, 2013). After-school programs are essential to keep kids safe, engage children in enriching activities, and give peace of mind to
working moms and dads during the out-of-school hours. Funding has proven to be one of the largest obstacles in providing after-school programs for students.

After-school programs are structural changes made to the traditional school day and can have a profound impact on student achievement (Granger, 2010). The emerging research on after-school program quality featured elements such as appropriate leadership and structure, well-prepared staff, intentional programming with appropriate activities, and strong partnerships (After-school Alliance, 2013). For these reasons, a theory of change for the study of after-school programs as described by Vandell et al. (2005) is an ideal framework used for helping to understand the structural aspects (leadership, activities, and partnerships) and outcome effects (reading and mathematics achievement scores) of the after-school program at the LMSD.
CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the effects of a specific 21st CCLC after-school program on student achievement. The major goal of this study was to explore the impact the after-school program’s strategic components (leadership, activities, and partnerships) had on student achievement. Moreover, the study was conducted to determine if the after-school program for the LMSD had a positive effect on academic outcomes in the areas of reading and mathematics of students who participated in the after-school program when compared to the academic outcomes of students who did not participate in the after-school program.

This chapter presents the methods used to examine the impact of the strategic components and effects on academic outcomes on students participating in the after-school program in the LMSD. This chapter consists of the following sections: research design, background information, the setting for the study, the selection of participants, and instruments used for data collection. In addition, the data collection and data analysis procedures used for the study are explained.

**Institutional Review Board Approval**

Permission to conduct the study was requested from the Mississippi State University Institutional Review Board (IRB) for the Protection of Human Subjects in
Research. Upon IRB approval (see Appendix A), the researcher gathered data for all CAPPS and Non-CAPPS participants. A letter of permission to collect data from the superintendent was obtained for all LMSD students in Grades 5-8 (see Appendix B).

**Research Design**

A mixed method research design was used to conduct the study. In mixed methods studies, investigators intentionally integrate or combine qualitative and quantitative data, to maximize the strengths and minimize the weaknesses of each (Klassen, Creswell, Clark, Smith, & Meissner, 2012). There are three basic types of mixed methods designs (convergent, sequential, and embedded). The type of design chosen is driven by the specific questions and aims in the particular investigations (Creswell & Plano Clark, 2011). A convergent design was utilized for this study. Convergent designs are used when the intent is to merge concurrent quantitative and qualitative data to address study aims (Morse & Niehaus, 2009). The data analysis consists of merging data which are collected concurrently, and examining the two sets of data and results (Creswell, & Plano Clark, 2011).

A narrative approach was used to provide a response to the first research question by describing the after-school program based on the format for a framework for change as outlined by Vandell et al. (2005). Existing documents related to the afternoon program’s leadership, activities, and partnerships were reviewed and analyzed, resulting in emergent themes. In addition to the narrative approach, a quantitative approach was used to determine the effects of the after-school program as measured by student achievement scores. This research study used an ex post facto design whereby existing data were collected from the records of students enrolled in grades 5-8 during the 2010-
11, 2011-12, and 2012-13 academic school year in the LMSD. The Chi-squared test of independence was used as the primary means of analysis for the second and third research questions to determine if relationships existed between participation in the after-school program and proficiency status, as determined by academic achievement scores in reading/language and mathematics.

**Setting**

This study was conducted in a rural Mississippi school district, LMSD. The school district is located in a low socioeconomic area of the state. All schools in the LMSD are Title I schools. To be considered a Title I school, the number of low-income students must be above 40%. Over 79% of the students in the district receive free or reduced lunches. Many working parents are having difficulties providing supervision and constructive activities for their children during after-school hours.

**Participants**

The study includes data for two groups: (a) participants in the CAPPS program and (b) nonparticipants in the CAPPS program. The study focused on students in Grades 5-8 who attended the CAPPS 21st CCLC after-school program. The CAPPS program met for 9 hours a week after-school during the school year and 20 days in the summer from 8:00am–12:00pm each day. The CAPPS program served approximately 200 students in the district each day in the after-school program. CAPPS served students at four school sites in the LMSD: Louisville Elementary School, Nanih Waiya Attendance Center, Noxapater Attendance Center, and the Boys & Girls Club of Winston County.
**Data Collection**

CAPPs is currently in Year 5 of the five-year 21st CCLC grant. Data collected from Years 2-4 were analyzed for this study. After all data were collected and recorded on a spreadsheet, the files were transferred to a Statistical Packages for the Social Sciences (SPSS) data file and analyzed.

For the first research question, data were obtained from continuation reports, program evaluations, and other CAPPs documents. Surveys and the Profile and Performance Information Collection System (PPICS) data collection system were also utilized for analysis. Field notes were taken to help organize the data into emergent themes.

For the second and third research questions, two different measures of program participation were utilized for the data collection for this study. First, a grouping variable (1 = CAPPs participant, 0 = non-CAPPs participant) identified students as program participants or nonparticipants. CAPPs participants were defined as students who reported being in an after-school program for 30 or more days (regular attendees), and non-CAPPs participants did not attend the CAPPs after-school program at all.

**Group 1 (CAPPs participants)**

For student data to be included in the study, the CAPPs student must have been considered a regular attendee in the CAPPs Program (attended at least 30 days during the CAPPs year which included 20 days during the summer). For this study, all regular attendees’ data were used. CAPPs is currently in Year 5 of the 21st CCLC grant. Data collected from Years 2-4 were analyzed for this study.
Group 2 (Non-CAPPS participants)

Group 2 consisted of students in Grades 5-8 who met the criteria to attend CAPPS; however, chose not to attend. All LMSD students in Grades 5-8 who met CAPPS criteria but chose not to attend were used for this study.

Data for the CAPPS participants were retrieved from the 21st CCLC PPICS Federal Reporting System database. All 21st CCLC programs are required to report yearly into the system. In addition, race, gender, and socioeconomic data for regular attendees were collected on enrollment papers and used for analysis. PPICS assigned numbers for regular attendees so their information is non-identifiable.

Data for the non-CAPPS participants were retrieved from LMSD central office. State assessment data (MCT2) and semester grades in reading and mathematics had been collected and were used for analysis. Non-CAPPS data were non-identifiable.

Data Analysis

Qualitative data were reviewed and utilized for the first research question to determine how the strategic components (leadership, activities, and partnerships) impacted student achievement. Narrative data are presented using Vandell et al.,’s (2005) framework of assessing change. This framework helped to clarify the structural aspects (leadership, activities, and partnerships) and outcome effects (reading and mathematics achievement scores) of the after-school program at the LMSD. Steps in developing a framework and assessing change brought about through means of after-school programs included the following: (a) Draw a logic model, (b) Identify program goals and strategies to meet the needs of the participants, (c) Determine program elements needed to achieve the program goals, and (d) Align participant outcomes with the program goals and
elements (Vandell et al., 2005). The goal was to use the framework as a guide to help provide a rich, thick description of the strategic components with emerging themes describing the impact of the strategic components.

As mentioned earlier, the Chi-squared test of independence was used as the primary means of analysis for the second and third research questions to determine if relationship existed between participation in the after-school program and academic achievement. A Chi-squared test of independence assesses whether paired observations on two nominal variables, expressed in a contingency table, are independent of each other. An alpha level of .05 was used to determine if the after-school program was having a statistically significant effect on academic achievement. When using Chi-squared test of independence, two assumptions must be met. First, each variable should be measured at an ordinal or nominal level (i.e., categorical data) and second, cases should be independent. Assumptions were checked as part of the analysis.

The following research questions guided the collection and analysis of data:

1) How do the strategic components (program leadership, activities, and partnerships) of an after-school program impact student achievement?

2) What effect does participation in an after-school program have on reading achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

3) What effect does participation in an after-school program have on mathematics achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?
Chapter Summary

The setting for this study was a rural Mississippi school district, LMSD. A mixed methods analysis was utilized for this study to maximize the strengths and minimize the weaknesses of each. Participants for this study included: (a) participants in the CAPPS program and (b) nonparticipants in the CAPPS program. Continuation reports, program evaluations, and other CAPPS documents were collected and analyzed for research question one. For research questions 2 and 3, data were collected from Years 2-4 and analyzed for this study. The Chi-squared test of independence was used as the primary means of analysis for the second and third research questions to determine if relationship existed between participation in the after-school program and academic achievement.
This chapter provides an analysis of the data collected for the study and presents the results of the study. This study investigated the effects of a specific 21st CCLC after-school program on student achievement. The major goal of this study was to explore the impact the after-school program’s strategic components (leadership, activities, and partnerships) had on student achievement. Further, the study sought to determine if the after-school program for the LMSD had a positive effect on academic outcomes in the areas of reading and mathematics of students who participated in the after-school program when compared to the academic outcomes of students who did not participate in the after-school program.

**Background Information**

In the spring of 2009, professors from the College of Education (COE) at Mississippi State University (MSU) collaborated with personnel in the LMSD and the Boys & Girls Club of Winston County located in central Mississippi to determine if LMSD students could benefit from a 21st CCLC after-school program. Demographic and economic information were collected for Winston County and showed that Winston County had a poverty rate of 35.96% (the 16th highest poverty rate in the state). Each school in the district was classified as a school-wide Title I school. Over 79% of the
students in the district received free or reduced lunches. Many working parents were having difficulties providing supervision and constructive activities for their children during after-school hours. The MCT2 scores of students were challenging teachers and students alike to raise the expectations of classroom performance and were leaving struggling students even further behind their peers.

Consequently, professors in the COE at MSU, administrators in the LMSD, and personnel from the Boys & Girls Club of Winston County determined the need for additional strategies to improve student achievement. They sought out funding from MDE. The grant proposal, CAPPS was awarded in the fall of 2009 in the amount of $1.87 million over a five year period.

**Research Question 1**

How do the strategic components (program leadership, activities, and partnerships) of an after-school program impact student achievement?

To answer the first research question, existing documents related to the after-school program including program-evaluations, evidence of activities and goals, etc, were utilized for analysis. Existing documents reviewed included continuation reports, program evaluations, and other CAPPS documents. The leadership and staff of CAPPS during the four-year period included a project director, teachers, tutors/paraprofessionals, consultants, and volunteers. The findings for the first research question begin with a narrative description of the strategic components: leadership, activities, and partnerships, and concludes with a logic model as suggested by Vandell et al. (2005) in developing a framework for change resulting from the leadership, activities and partnerships of the CAPPS program.
Program Leadership

The CAPPS project director was responsible for all technical aspects of the after-school program. The CAPPS project director’s responsibilities included collaborating with the superintendent, principals, teachers, paraprofessionals/tutors, and partners. In addition, the CAPPS project director was responsible for creating recruitment materials (e.g. brochures, flyers, etc.); recruiting students in Grades 5-12; recruiting teachers, paraprofessionals/tutors, and community members; serving as a liaison with partner schools in the LMSD; collaborating and coordinating with the Boys & Girls Club of Winston County Director and Board members; coordinating and corresponding with the CAPPS Advisory Board; coordinating meetings of grant partners and participants; assisting teachers, paraprofessionals/tutors, and students working in the program; assisting with data collection and maintenance of databases; maintaining files and documentation; planning professional development for participating teachers and tutors/paraprofessionals; coordinating and directing the afterschool and summer tutorial/enrichment programs; and, administering other project-based activities.

In addition to the project director, CAPPS supported lead teachers at each of the partner schools in the LMSD. The lead teachers worked 4 hours a week. Lead teacher responsibilities included: consulting with teachers in Grades 5-12 at assigned schools to determine the specific subject-matter needs of the CAPPS students; communicating the needs of the CAPPS students to the teachers, tutors/paraprofessionals, and project director; assisting the project director and other MSU faculty with assessing CAPPS students’ growth and progress; and serving as a liaison between the assigned school and CAPPS staff.
CAPPS teachers worked 10 hours a week. Teacher responsibilities included: tutoring and assisting CAPPS students with homework; planning and preparing activities for students participating in CAPPS; communicating the needs of the participating students to the project director and faculty; assisting the project director and faculty with assessing participating students’ growth and progress; and, participating in professional development activities. Some teachers worked as teachers and lead teachers.

CAPPS tutors/paraprofessionals worked 9 hours a week. Tutor/paraprofessional responsibilities included: providing academic tutoring and homework assistance for participating students; assisting with providing enrichment courses and activities for participating students; and working with individual and with small groups of students. Tutors could be certified teachers, paraprofessionals, or MSU COE teacher candidates. Some tutors/paraprofessionals moved to teacher positions when openings occurred.

CAPPS consultants provided special services for fifth - twelfth grade students. Consultants were certified teachers, paraprofessionals, Boys & Girls Club of Winston County employees, and professionals, and/or teacher candidates.

Volunteers in the CAPPS program worked with individual and small groups of students to provide academic tutoring and homework assistance. Volunteers also assisted with providing enrichment courses and activities.

Staff orientation for CAPPS staff was held yearly. The following topics were discussed/explained during the initial staff orientation: an overview/explanation of the CAPPS program; identification of lead teachers along with an explanation of their roles and responsibilities; roles and responsibilities of the classroom teachers and the
tutors/paraprofessionals; information regarding students, the CAPPS application process, student referrals, etc., and the organizational structure of the CAPPS program.

The program director serving in the leadership role for CAPPS proved to be instrumental to the success of the after-school program. The project director who was hired from one of the schools in the LMSD brought a wealth of knowledge to the CAPPS program. The project director had a working knowledge of the LMSD, already knowing the district administrators, teachers, parents and students.

Major themes emerging from the data reviewed for the first research question revealed that the program director had a tremendous working knowledge, demonstrated strong communication skills, and was strategic in day-to-day operations. The leader’s behavior may be explained by the utilization of a framework for change. Goals and activities were focused with strong collaboration throughout the implementation. The leadership contributed to the successful implementation of the CAPPS program. A key finding was program growth demonstrated by increased student enrollment for Years 2-4 as evidenced on the continuation reports. Surveys indicated the project director’s collaboration with the superintendent, principals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents improved. The outcome of this collaboration contributed to the positive impact on student achievement for CAPPS students.

**Activities**

As outlined in continuation reports, CAPPS staff and volunteers provided tutoring and enrichment services to fifth - twelfth grade students in the LMSD at Eiland Middle School, Louisville Elementary School, Noxapater Attendance Center, and Nanih Waiya
Attendance Center. CAPPS staff, consultants, and volunteers served as teachers and tutors for individual and small groups of students.

CAPPS staff engaged students in activities aligned with the rigorous learning standards of the MDE and the LMSD. The innovative learning activities were designed to be meaningful, engaging, and challenging for students. The academic enrichment components of the CAPPS program were implemented to produce positive results among participating students, such as improved achievement in classroom academics, improved test scores, increased retention rates, and increased class attendance. The summer enrichment program in CAPPS provided students with opportunities to engage in academic enrichment activities geared to promote the arts, photography, health, science, mathematics, technology, and literacy development.

CAPPS staff provided academic tutoring using evidence-based curricula and strategies to increase vocabulary, reading fluency and comprehension, mathematics fluency and sense, learning and problem-solving skills, and included career/college preparation activities. Instruction was based on individual performance assessments of the students and complemented the students’ regular academic program with an emphasis on active, hands-on learning activities.

Students participating in the CAPPS program were provided with the necessary resources, technology, and personal assistance needed to complete homework assignments and projects and for test preparation. In addition to academic and homework assistance, CAPPS offered courses of interest to students to develop skills and build character.
During Year 2, CAPPS students visited the MSU Starkville campus, attended a MSU women’s basketball game, and had lunch at the university cafeteria. During the summer enrichment program, CAPPS students participated in field days at the school sites, events sponsored by the Louisville Fire Department and Winston County Volunteer Fire Departments, programs sponsored by the Winston County Extension Service, and visited local parks to reinforce concepts taught during CAPPS summer enrichment session.

During Year 3, in addition to providing academic and homework assistance, CAPPS offered courses of interest to students to develop skills, build character, create interest in science and math, and expand experiences in the arts, including music, visual arts, and photography. CAPPS students visited Ivy City Park, Legion State Park, and Noxubee Wildlife Refuge during the summer enrichment program to reinforce concepts taught during the CAPPS summer program. CAPPS students participated in field days at the CAPPS sites and in events and programs sponsored by the Louisville Fire Department and Winston County Volunteer Fire Departments, the National Geographic Alliance, the Human Society, and the Winston County Extension Service.

During Year 4, the CAPPS staff continued providing academic and homework assistance and offering courses of interest to students to develop skills, build character, create interest in science and math, and expand experiences in the arts. CAPPS students visited the Ivy City Park and the Noxubee Wildlife Refuge during the summer enrichment program to reinforce concepts taught during the summer program. Students participated in field days at the CAPPS sites.
Several key accomplishments were observed by CAPPS project director as noted in continuation reports, evaluations and on surveys. As reported in the PPICS data collection system, attendance in the CAPPS program improved during Years 2 and 3 while leveling off for Year 4. During Year 2, over 395 students in fifth - twelfth grades were enrolled for the CAPPS program. CAPPS had over 196 students attend at one time. CAPPS served approximately 455 students at the four CAPPS sites during Year 3 and approximately 400 students during Year 4.

During Years 2-4, surveys completed by classroom teachers, principals, and parents reported improved academic achievement of students participating in CAPPS. In addition, state accountability levels for schools in the LMSD improved. Students in CAPPS were exposed to enrichment activities that included the arts through photography, art, and various field trips. CAPPS teachers and tutors/paraprofessionals provided ongoing character education during the after-school program and continued structured sessions during the summer enrichment program. Another key accomplishment for CAPPS was the involvement of parents/guardians. Parents/guardians were involved in parent sessions at each school site, community sites, and some were selected to serve on the CAPPS Advisory Board.

CAPPS activities were scheduled each week and a monthly calendar was completed by the project director, CAPPS staff, lead teachers, teachers and tutor/paraprofessionals. During Year 2, according to the continuation report, there was a noticeable improvement with collaboration between CAPPS lead teachers and teachers and classroom teachers in the LMSD. The CAPPS lead teachers continued to work closely with classroom teachers and principals to prepare for Subject Area Test Program
(SATP) and MCT2 testing. During Year 3, the improvement in collaboration between the CAPPS lead teachers and teacher and classroom teachers in the LMSD allowed for CAPPS staff to identify more focused topics specific to after-school programs. This led to more targeted professional development opportunities for the CAPPS teachers. The targeted professional development continued for Year 4.

CAPPS provided technology education for the CAPPS students. During Year 2, the LMSD purchased ClassWorks for all schools in the district. ClassWorks, which is a computerized academic program used for Language Arts and Mathematics to help increase student achievement on state assessments, was used by CAPPS students for enrichment and remediation. During Year 3, Direct TV Goes to School was installed in all CAPPS classrooms to allow teachers and students access to enrichment media. Both programs were utilized during Year 4.

Emergent themes related to the activities were as follows: (a) students were provided with academic tutoring and homework assistance daily, (b) enrichment activities were focused on improving student academic performance on state test scores, (c) activities promoted positive character building skills to decrease student discipline issues by initiating a positive reinforcement rewards program to students weekly, (d) activities promoted collaboration between classroom teachers and lead teachers, and (e) activities promoted parental involvement and collaboration.

**Partnerships**

Documentation show that the partnerships for Year 2 included agencies that provided support and assistance to the CAPPS program. The Vice President of the Office of Finance and Administration at MSU provided lunches to students during field trips to
the MSU campus. Faculty in the Department of Curriculum, Instruction, and Special Education at MSU provided professional development and instructional guidance for CAPPS staff and assisted with teaching in the summer program. The MSU Riley Center in Meridian provided discounted tickets for CAPPS program participants to attend a dramatic event. The MSU College of Veterinary Medicine coordinated tours of the Vet School for CAPPS students. MSU Athletics provided tickets for an MSU sporting event and volunteers to attend the events with CAPPS students. The Winston County Public Library showcased information about the CAPPS program along with student work and photos. Physical education teacher candidates worked with CAPPS students during practicums at CAPPS sites. During the summer program, the Louisville Fire Department provided enrichment activities for the students.

The partnerships for Year 3 included faculty from the Department of Curriculum, Instruction and Special Education (CISE) in the COE who assisted with the summer enrichment program. They assisted by providing lesson plans and materials for the summer program. The Family Centered Programs in the Starkville School District, provided character education lessons for the CAPPS students from the Love U2: Relationship Smarts Plus program, a research-based curriculum that uses hands-on activities to build skills and knowledge necessary for making wise relationship choices. Legion State Park and Ivy City Park in Winston County provided free facilities to host CAPPS field days held during the summer. The Winston County Journal continued to offer publicity and news articles providing updates and photos throughout the year to make the community aware of the positive impact the CAPPS program is having on the students in the LMSD. A representative from the Mississippi Geographic Alliance
provided geography/reading activities for the CAPPS students during the summer program and during Parent Literacy functions. The program director of the College Access Challenge Grant at MSU worked with sixth grade students at all CAPPS sites on a weekly basis to encourage and offer assistance to begin planning for college and the future.

The partnerships for Year 4 included faculty from the CISE in the COE who assisted with the summer enrichment program. They coordinated with CAPPS staff to place teacher candidates as tutors in the CAPPS program. Legion State Park and Ivy City Park in Winston County continued to provide free facilities to host CAPPS field days held during the summer. The Winston County Journal continued to offer publicity and news articles providing updates and photos throughout the year to make the community aware of the positive impact of the CAPPS program. The program director of the College Access Challenge Grant at MSU worked with seventh grade students at all CAPPS sites on a weekly basis to encourage and offer assistance to begin planning for college and the future. The Near-Peer Mentors in the College Access Challenge Grant College Knowledge Project work with 7th grade students at all CAPPS sites.

Emergent themes related to the partnerships were as follows: (a) partnerships provided resources to enhance student activities as evidenced on continuation reports (b) partnerships provided additional staffing for the after-school program reducing teacher to student ratios as evidenced in PPICS data collection system, (c) partnerships enhanced collaboration with community members and parents, (d) partnerships provided invaluable experiences for teacher candidates.
A Logic Model

A logic model (see Appendix C) is used to illustrate the emergent themes and to help explain the theoretical framework for change as found in the CAPPS program. The logic model provides an illustration of the inputs for the CAPPS after-school program, Leadership, Activities, and Partnerships. Outputs for CAPPS activities are identified as tutoring, homework assistance, enrichment (arts, music, and photography), and character education. Outputs for CAPPS participation are CAPPS participants, principals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents.

Outcomes for CAPPS short term impact for the leadership component are as follows: (a) Increase Attendance in the after-school program, and (b) Increase Collaboration between, principals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents. Outcomes for CAPPS short term impact for the activities component are as follows: (a) Increase completion rate of homework, (b) Improve student academic performance on state test scores, and (c) Promote positive character building skills. Outcomes for CAPPS short term impact for the partnership component are as follows: (a) Partnerships provide resources to enhance student activities, (b) Partnerships provide additional staffing for the after-school program reducing teacher to student ratios, and (c) Partnerships provide invaluable experiences for teacher candidates. Outcomes for CAPPS long term impact for all components are as follows: (a) Increase MCT2 scores in Reading, and (b) Increase MCT2 scores in Mathematics.
Summary of Research Findings for Research Question 1

Table 3 provides a summary of the findings for research question 1.

Table 3

*Emergent Themes of Structural Components*

<table>
<thead>
<tr>
<th>Structural Components</th>
<th>Emergent Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leadership</strong></td>
<td>• The leader had a tremendous working knowledge of LMSD</td>
</tr>
<tr>
<td></td>
<td>• The leader demonstrated strong communication skills</td>
</tr>
<tr>
<td></td>
<td>• The leader was strategic in day-to-day operations</td>
</tr>
<tr>
<td></td>
<td>• The leader focused on strong collaboration throughout the implementation</td>
</tr>
<tr>
<td></td>
<td>• The leader contributed to the successful implementation of the CAPPS program</td>
</tr>
<tr>
<td></td>
<td>• Students were provided with academic tutoring and homework assistance daily</td>
</tr>
<tr>
<td></td>
<td>• Enrichment activities were focused on improving student academic performance on state test scores</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>• Activities promoted positive character building skills to decrease student discipline issues by initiating a positive reinforcement rewards program to students weekly</td>
</tr>
<tr>
<td></td>
<td>• Activities promoted collaboration between classroom teachers and lead teachers</td>
</tr>
<tr>
<td><strong>Partnerships</strong></td>
<td>• Activities promoted parental involvement and collaboration</td>
</tr>
<tr>
<td></td>
<td>• Partnerships provided resources to enhance student activities as evidenced on continuation reports</td>
</tr>
<tr>
<td></td>
<td>• Partnerships provided additional staffing for the after-school program reducing teacher to student ratios as evidenced in PPICS data collection system,</td>
</tr>
<tr>
<td></td>
<td>• Partnerships enhanced collaboration with community members and parents</td>
</tr>
<tr>
<td></td>
<td>• Partnerships provided invaluable experiences for teacher candidates.</td>
</tr>
</tbody>
</table>
Research Question 2

What effect does participation in an after-school program have on reading achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

To answer the second research question, the selected variable was used as a predictor of student academic achievement. The predictor variable was hypothesized to be a useful predictor of student academic achievement. The independent variable had two levels: regular participation in CAPPS or non-participation in CAPPS. The dependent variable was reading proficiency levels (Advanced, Proficient, Basic, and Minimal) on MCT2.

Data results represent student proficiency scores in reading/language after being enrolled in CAPPS for one year.

Grade 5 Reading/Language

Table 4 shows data for Grade 5 in Reading/Language. Data are displayed for Years 2, 3, and 4.
Table 4

**Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 5**

<table>
<thead>
<tr>
<th></th>
<th>Minimal</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>190</td>
</tr>
<tr>
<td>CAPPS</td>
<td>3 (9%)</td>
<td>10 (30%)</td>
<td>16 (49%)</td>
<td>4 (12%)</td>
<td>33 (17%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>26 (17%)</td>
<td>94 (59%)</td>
<td>37 (24%)</td>
<td>0 (0%)</td>
<td>157 (83%)</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>163</td>
</tr>
<tr>
<td>CAPPS</td>
<td>25 (28%)</td>
<td>26 (29%)</td>
<td>34 (39%)</td>
<td>4 (4%)</td>
<td>89 (55%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>12 (16%)</td>
<td>35 (48%)</td>
<td>23 (31%)</td>
<td>4 (5%)</td>
<td>74 (45%)</td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>CAPPS</td>
<td>15 (20%)</td>
<td>30 (40%)</td>
<td>26 (35%)</td>
<td>4 (5%)</td>
<td>75 (50%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>17 (23%)</td>
<td>45 (59%)</td>
<td>11 (15%)</td>
<td>2 (3%)</td>
<td>75 (50%)</td>
</tr>
</tbody>
</table>

The data in Table 4 show there were 33 students who participated in CAPPS and 157 students who did not participate in CAPPS for Year 2. For Year 3, there were 89 students who participated in CAPPS and 74 students who did not participate in CAPPS. During Year 4, there were 75 students who participated in CAPPS and 75 students who did not participate in CAPPS. Table 4 also shows a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test of independence was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 5 shows output for Grade 5 in Reading/Language Arts. Data are displayed for Year 2.
Table 5

*Chi-squared Test: Grade 5 Reading/Language Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>30.453</td>
<td>3</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>25.386</td>
<td>3</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>190</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 2 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=190)=30.45, p <.001$. When students participated in the after-school program proficiency levels were classified advanced 12% of the time, proficient 49% of the time, basic 30% of the time, and minimal 9% of the time. The effect size (phi) is .400, a medium to large effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 6 shows output for Grade 5 in Reading/Language Arts. Data are displayed for Year 3.
Table 6

**Chi-squared Test: Grade 5 Reading/Language Year 3**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>6.695</td>
<td>3</td>
<td>.082</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.753</td>
<td>3</td>
<td>.080</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 3 reading proficiency levels were not statistically significant: $\chi^2(3, N=163)=6.70, p = .082$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s reading/language scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 7 shows output for Grade 5 in Reading/Language Arts. Data are displayed for Year 4.

Table 7

**Chi-squared Test: Grade 5 Reading/Language Year 4**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>9.873</td>
<td>3</td>
<td>.020*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>10.085</td>
<td>3</td>
<td>.018</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05*
The Year 4 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: χ²(3, N=150)=9.87, p = .020. When students participated in the after-school program proficiency levels were advanced 5% of the time, proficient 35% of the time, basic 40% of the time, and minimal 20% of the time. The effect size (phi) is .257, a small to medium effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 4.

**Grade 6 Reading/Language**

Table 8 shows data for Grade 6 in Reading/Language. Data are displayed for Years 2, 3, and 4.
Table 8

*Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 6*

<table>
<thead>
<tr>
<th></th>
<th>Minimal</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>136</td>
</tr>
<tr>
<td>CAPPS</td>
<td>1 (3%)</td>
<td>7 (21%)</td>
<td>22 (67%)</td>
<td>3 (9%)</td>
<td>33 (24%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>17 (17%)</td>
<td>43 (42%)</td>
<td>37 (36%)</td>
<td>6 (5%)</td>
<td>103 (76%)</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>157</td>
</tr>
<tr>
<td>CAPPS</td>
<td>27 (36%)</td>
<td>14 (18%)</td>
<td>33 (43%)</td>
<td>2 (3%)</td>
<td>76 (48%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>41 (51%)</td>
<td>21 (26%)</td>
<td>17 (21%)</td>
<td>2 (2%)</td>
<td>81 (52%)</td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>145</td>
</tr>
<tr>
<td>CAPPS</td>
<td>13 (19%)</td>
<td>16 (24%)</td>
<td>32 (48%)</td>
<td>6 (9%)</td>
<td>67 (46%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>16 (21%)</td>
<td>38 (49%)</td>
<td>23 (29%)</td>
<td>1 (1%)</td>
<td>78 (54%)</td>
</tr>
</tbody>
</table>

The data in Table 8 show there were 33 students who participated in CAPPS and 103 students who did not participate in CAPPS for Year 2. For Year 3, there were 76 students who participated in CAPPS and 81 students who did not participate in CAPPS. During Year 4, there were 67 students who participated in CAPPS and 78 students who did not participate in CAPPS. Table 8 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 9 shows output for Grade 6 in Reading/Language Arts. Data are displayed for Year 2.
Table 9

*Chi-squared Test: Grade 6 Reading/Language Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>12.524</td>
<td>3</td>
<td>0.014*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>13.659</td>
<td>3</td>
<td>0.008</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>137</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.05

The Year 2 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=145)=13.56, p = .004$. When students participated in the after-school program proficiency levels were advanced 9% of the time, proficient 48% of the time, basic 24% of the time, and minimal 19% of the time. The effect size (phi) is .306, a medium effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 6 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 10 shows output for Grade 6 in Reading/Language Arts. Data are displayed for Year 3.
<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>9.253</td>
<td>3</td>
<td>.026*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>9.364</td>
<td>3</td>
<td>.025</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>157</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.05

Data are displayed for Years2PS and 75 students did not participate in CAPPS. in CAPPS. Year 4, om LMSD for Non-CAPPS Parti

The Year 3 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=137)=12.52, p = .014$. When students participated in the after-school program proficiency levels were advanced 9% of the time, proficient 67% of the time, basic 21% of the time, and minimal 3% of the time. The effect size (phi) is .302, a medium effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 6 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 11 shows output for Grade 6 in Reading/Language Arts. Data are displayed for Year 4.
Table 11

**Chi-squared Test: Grade 6 Reading/Language Year 4**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>13.561</td>
<td>3</td>
<td>.004*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>14.146</td>
<td>3</td>
<td>.003</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>145</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 4 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3,N=157)=9.25, p = .026$. When students participated in the after-school program proficiency levels were advanced 3% of the time, proficient 43% of the time, basic 36% of the time, and minimal 18% of the time. The effect size (phi) is .243, a small to medium effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 6 when compared to students who were not enrolled in the CAPPS program during Year 4.

**Grade 7 Reading/Language**

Table 12 shows data for Grade 7 in Reading/Language. Data are displayed for Years 2, 3, and 4.
Table 12

Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 7

<table>
<thead>
<tr>
<th></th>
<th>Minimal</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>124</td>
</tr>
<tr>
<td>CAPPS</td>
<td>14 (23%)</td>
<td>23 (38%)</td>
<td>20 (33%)</td>
<td>4 (6%)</td>
<td>61 (49%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>14 (22%)</td>
<td>30 (48%)</td>
<td>17 (27%)</td>
<td>2 (3%)</td>
<td>63 (51%)</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>108</td>
</tr>
<tr>
<td>CAPPS</td>
<td>5 (13%)</td>
<td>22 (55%)</td>
<td>12 (30%)</td>
<td>1 (2%)</td>
<td>40 (37%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>18 (26%)</td>
<td>35 (51%)</td>
<td>14 (21%)</td>
<td>1 (2%)</td>
<td>68 (63%)</td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>139</td>
</tr>
<tr>
<td>CAPPS</td>
<td>10 (26%)</td>
<td>6 (15%)</td>
<td>20 (51%)</td>
<td>3 (8%)</td>
<td>39 (28%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>23 (23%)</td>
<td>49 (49%)</td>
<td>25 (25%)</td>
<td>3 (3%)</td>
<td>100 (72%)</td>
</tr>
</tbody>
</table>

The data in Table 12 show there were 61 students who participated in CAPPS and 63 students who did not participate in CAPPS for Year 2. For Year 3, there were 40 students who participated in CAPPS and 68 students who did not participate in CAPPS. During Year 4, there were 39 students who participated in CAPPS and 100 students who did not participate in CAPPS. Table 12 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 13 shows output for Grade 7 in Reading/Language Arts. Data are displayed for Year 2.
Table 13

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>1.803</td>
<td>3</td>
<td>.772</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>1.818</td>
<td>3</td>
<td>.769</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 2 reading proficiency levels were not statistically significant: $\chi^2(3, N=124)=1.80, p = .772$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s reading/language scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 14 shows output for Grade 7 in Reading/Language Arts. Data are displayed for Year 3.

Table 14

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>3.438</td>
<td>3</td>
<td>.329</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>3.602</td>
<td>3</td>
<td>.308</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Year 3 reading proficiency levels were not statistically significant: $\chi^2(3, N=108)=3.44, p = .329$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s reading/language scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 15 shows output for Grade 7 in Reading/Language Arts. Data are displayed for Year 4.

Table 15

*Chi-squared Test: Grade 7 Reading/Language Year 4*

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>15.513</td>
<td>3</td>
<td>.001*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>16.455</td>
<td>3</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>139</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.05

The Year 4 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=139)=15.51, p = .001$. When students participated in the after-school program proficiency levels were advanced 8% of the time, proficient 51% of the time, basic 15% of the time, and minimal 26% of the time. The effect size (phi) is .334, a medium to large effect.
The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 4.

**Grade 8 Reading/Language**

Table 16 shows data for Grade 8 in Reading/Language. Data are displayed for Years 2, 3, and 4.

Table 16

*Frequency/Percentage of Proficiency Levels in Reading/Language MCT2 for Grade 8*

<table>
<thead>
<tr>
<th></th>
<th>Minimal</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>CAPPS</td>
<td>14 (25%)</td>
<td>27 (48%)</td>
<td>13 (23%)</td>
<td>2 (4%)</td>
<td>56 (56%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>16 (36%)</td>
<td>23 (52%)</td>
<td>4 (9%)</td>
<td>1 (3%)</td>
<td>44 (44%)</td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>92</td>
</tr>
<tr>
<td>CAPPS</td>
<td>0 (0%)</td>
<td>6 (35%)</td>
<td>11 (65%)</td>
<td>0 (0%)</td>
<td>17 (18%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>15 (20%)</td>
<td>46 (61%)</td>
<td>14 (19%)</td>
<td>0 (0%)</td>
<td>75 (82%)</td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>CAPPS</td>
<td>2 (11%)</td>
<td>7 (39%)</td>
<td>9 (50%)</td>
<td>0 (0%)</td>
<td>18 (17%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td>19 (22%)</td>
<td>49 (56%)</td>
<td>17 (20%)</td>
<td>2 (2%)</td>
<td>87 (83%)</td>
</tr>
</tbody>
</table>

The data in Table 16 show there were 56 students who participated in CAPPS and 44 students who did not participate in CAPPS for Year 2. For Year 3, there were 17 students who participated in CAPPS and 75 students who did not participate in CAPPS. During Year 4, there were 18 students participated in CAPPS and 87 students who did not participate in CAPPS. Table 16 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.
Table 17 shows output for Grade 8 in Reading/Language Arts. Data are displayed for Year 2.

Table 17

*Chi-squared Test: Grade 8 Reading/Language Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>4.171</td>
<td>3</td>
<td>.244</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>4.367</td>
<td>3</td>
<td>.224</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 2 reading proficiency levels were not statistically significant: $\chi^2(3, N=100)=4.17, p = .244$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s reading/language scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 18 shows output for Grade 8 in Reading/Language Arts. Data are displayed for Year 3.
Table 18

Chi-squared Test: Grade 8 Reading/Language Year 3

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>15.873</td>
<td>3</td>
<td>.001*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>16.567</td>
<td>3</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 3 reading proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(2, N=92)=15.873, p < .001$. When students participated in the after-school program proficiency levels were advanced 0% of the time, proficient 65% of the time, basic 35% of the time, and minimal 0% of the time. The effect size (phi) is .415, a medium to large effect.

The CAPPS program data showed a statistically significant effect on the student’s reading/language scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 19 shows output for Grade 8 in Reading/Language Arts. Data are displayed for Year 4.
Table 19

Chi-squared Test: Grade 8 Reading/Language Year 4

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>7.71</td>
<td>3</td>
<td>.052</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>7.262</td>
<td>3</td>
<td>.064</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 4 reading proficiency levels were not statistically significant: $\chi^2(3, N=105)=7.71, p = .052$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s reading/language scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 3.

**Summary of Findings for Research Question 2**

Analysis of data for research question 2 yielded the following findings: (a) larger percentage of CAPPS students by grade level scoring proficient and advanced compared to Non-CAPPS students for Years 2-4, (b) higher percentage of eligible fifth grade students participated in CAPPS during Year 2 than Years 3 and 4 (55%) when compared to Non-CAPPS participants, (c) higher percentage of eligible sixth grade students participated in CAPPS during Year 3 than Years 2 and 4 (48%) when compared to Non-CAPPS participants, (d) higher percentage of eligible seventh grade students participated in CAPPS during Year 2 than Years 3 and 4 (49%) when compared to Non-CAPPS
participants, and (e) higher percentage of eligible eighth grade students participated in CAPPS during Year 2 than Years 3 and 4 (56%) when compared to Non-CAPPS participants.

Based on the Chi-squared test results, statistical significance in reading/language was reported for (a) Grade 5 in Year 2: $\chi^2(3, N=190)=30.45, p < .001$, and Year 4: $\chi^2(3, N=150)=9.87, p = .020$, (b) Grade 6 in Year 2: $\chi^2(3, N=145)=13.56, p = .004$, Year 3: $\chi^2(3, N=137)=12.52, p = .014$, and Year 4: $\chi^2(3, N=157)=9.25, p = .026$. (c) Grade 7 in Year 4: $\chi^2(3, N=139)=15.51, p = .001$, and (d) Grade 8 in Year 3: $\chi^2(2, N=92)=15.873, p < .001$.

Statistically significant findings demonstrated a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program. When findings were not statistically significant, a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

**Research Question 3**

What effect does participation in an after-school program have on mathematics achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

To answer the third research question, the selected variable was used as a predictor of student academic achievement. The predictor variable was hypothesized to be a useful predictor of student academic achievement. The independent variable had
two levels: regular participation in CAPPS or non-participation in CAPPS. The
dependent variable was mathematics proficiency levels (Advanced, Proficient, Basic, and
Minimal) on MCT2.

Data results represent student proficiency scores in reading/language after being
enrolled in CAPPS for one year.

**Grade 5 Mathematics**

Table 20 shows data for Grade 5 in Mathematics. Data are displayed for Years 2,
3, and 4.

Table 20

*Frequency/Percentage of Proficiency Levels in Mathematics MCT2 for Grade 5*

<table>
<thead>
<tr>
<th></th>
<th>Year 2</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Minimal</td>
<td>Basic</td>
<td>Proficient</td>
<td>Advanced</td>
<td></td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td>5 (15%)</td>
<td>6 (18%)</td>
<td>16 (49%)</td>
<td>6 (18%)</td>
<td>33 (17%)</td>
</tr>
<tr>
<td>CAPPS</td>
<td></td>
<td>20 (13%)</td>
<td>61 (39%)</td>
<td>60 (38%)</td>
<td>16 (10%)</td>
<td>157 (83%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td></td>
<td>190</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td>17 (19%)</td>
<td>22 (25%)</td>
<td>44 (38%)</td>
<td>6 (7%)</td>
<td>89 (55%)</td>
</tr>
<tr>
<td>CAPPS</td>
<td></td>
<td>16 (22%)</td>
<td>36 (49%)</td>
<td>21 (28%)</td>
<td>1 (1%)</td>
<td>74 (45%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td></td>
<td>163</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td>10 (13%)</td>
<td>26 (35%)</td>
<td>31 (41%)</td>
<td>8 (11%)</td>
<td>75 (50%)</td>
</tr>
<tr>
<td>CAPPS</td>
<td></td>
<td>9 (12%)</td>
<td>38 (51%)</td>
<td>25 (33%)</td>
<td>3 (4%)</td>
<td>75 (50%)</td>
</tr>
<tr>
<td>Non-CAPPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data in Table 20 show there were 33 students who participated in CAPPS and
157 students who did not participate in CAPPS for Year 2. For Year 3, there were 89
students who participated in CAPPS and 74 students who did not participate in CAPPS.
During Year 4, there were 75 students who participated in CAPPS and 75 students who
did not participate in CAPPS. Table 20 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in mathematics on the MCT2 compared to students who did not attend the after-school program.

Table 21 shows output for Grade 5 in Mathematics. Data are displayed for Year 2.

Table 21

*Chi-squared Test: Grade 5 Mathematics Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>5.648</td>
<td>3</td>
<td>.130</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.008</td>
<td>3</td>
<td>.111</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>190</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 2 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=190)=5.65$, $p = .130$ demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s mathematics scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 22 shows output for Grade 5 in Mathematics. Data are displayed for Year 3.
Table 22

**Chi-squared Test: Grade 5 Mathematics Year 3**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>13.856</td>
<td>3</td>
<td>.003*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>14.341</td>
<td>3</td>
<td>.002</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>163</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 3 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=163)=13.86, p = .003$. When students participated in the after-school program proficiency levels were advanced 7% of the time, proficient 49% of the time, basic 25% of the time, and minimal 19% of the time. The effect size (phi) is .292, a medium effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 23 shows output for Grade 5 in Mathematics. Data are displayed for Year 4.
Table 23

Chi-squared Test: Grade 5 Mathematics Year 4

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>5.218</td>
<td>3</td>
<td>.156</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>5.318</td>
<td>3</td>
<td>.150</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>150</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 4 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=150)=5.22, p = .156$ demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s mathematics scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 3.

Grade 6 Mathematics

Table 24 shows data for Grade 6 in Mathematics. Data are displayed for Years 2, 3, and 4.
Table 24

Frequency/Percentage of Proficiency Levels in Mathematics MCT2 for Grade 6

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Minimal</th>
<th>Basic</th>
<th>Proficient</th>
<th>Advanced</th>
<th>Proficiency Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>136</td>
<td>3 (9%)</td>
<td>11 (33%)</td>
<td>18 (55%)</td>
<td>1 (3%)</td>
<td>CAPPS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 (17%)</td>
<td>49 (48%)</td>
<td>33 (32%)</td>
<td>3 (3%)</td>
<td>Non-CAPPS</td>
</tr>
<tr>
<td>Year 2</td>
<td>157</td>
<td>13 (17%)</td>
<td>16 (21%)</td>
<td>41 (54%)</td>
<td>6 (8%)</td>
<td>CAPPS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13 (16%)</td>
<td>40 (49%)</td>
<td>26 (32%)</td>
<td>2 (3%)</td>
<td>Non-CAPPS</td>
</tr>
<tr>
<td>Year 4</td>
<td>145</td>
<td>4 (6%)</td>
<td>11 (16%)</td>
<td>42 (63%)</td>
<td>10 (15%)</td>
<td>CAPPS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 (8%)</td>
<td>35 (45%)</td>
<td>31 (39%)</td>
<td>6 (8%)</td>
<td>Non-CAPPS</td>
</tr>
</tbody>
</table>

The data in Table 24 show there were 33 students who participated in CAPPS and 103 students who did not participate in CAPPS for Year 2. For Year 3, there were 76 students who participated in CAPPS and 81 students who did not participate in CAPPS. During Year 4, there were 67 students who participated in CAPPS and 78 students who did not participate in CAPPS. Table 24 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 25 shows output for Grade 6 in Mathematics. Data are displayed for Year 2.
Table 25

*Chi-squared Test: Grade 6 Mathematics Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>6.012</td>
<td>3</td>
<td>.198</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.156</td>
<td>3</td>
<td>.198</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>137</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 2 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=137)=6.01, p = .198$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 5 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 26 shows output for Grade 6 in Mathematics. Data are displayed for Year 3.

Table 26

*Chi-squared Test: Grade 6 Mathematics Year 3*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>15.500</td>
<td>3</td>
<td>.001*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>15.947</td>
<td>3</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>157</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05*
The Year 3 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=157)=15.50, p = .001$. When students participated in the after-school program proficiency levels were advanced 8% of the time, proficient 54% of the time, basic 21% of the time, and minimal 17% of the time. The effect size (phi) is .314, a medium effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 6 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 27 shows output for Grade 6 in Mathematics. Data are displayed for Year 4.

Table 27

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>14.83</td>
<td>3</td>
<td>.002*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>15.405</td>
<td>3</td>
<td>.002</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>145</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 4 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=145)=14.83, p = .002$. When
students participated in the after-school program proficiency levels were advanced 15% of the time, proficient 63% of the time, basic 16% of the time, and minimal 6% of the time. The effect size (phi) is .320, a medium effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 6 when compared to students who were not enrolled in the CAPPS program during Year 4.

Grade 7 Mathematics

Table 28 shows data for Grade 7 in Mathematics. Data are displayed for Years 2, 3, and 4.

Table 28

| Frequency/Percentage of Proficiency Levels in Mathematics MCT2 for Grade 7 |
|-----------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                             | Minimal | Basic | Proficient | Advanced | Total |
| **Year 2**                  |         |       |            |          |       |
| CAPPS                       | 1 (1%)  | 37 (61%) | 23 (38%)  | 0 (0%)   | 61 (49%) |
| Non-CAPPS                   | 7 (11%) | 39 (62%) | 17 (27%)  | 0 (0%)   | 63 (51%) |
| **Year 3**                  |         |       |            |          |       |
| CAPPS                       | 11 (28%) | 16 (40%) | 6 (15%)  | 7 (17%)  | 40 (37%) |
| Non-CAPPS                   | 11 (16%) | 44 (65%) | 13 (19%)  | 0 (0%)   | 68 (63%) |
| **Year 4**                  |         |       |            |          |       |
| CAPPS                       | 7 (17%) | 8 (21%)  | 21 (54%)  | 3 (8%)   | 39 (28%) |
| Non-CAPPS                   | 13 (13%) | 41 (41%) | 43 (43%)  | 3 (3%)   | 100 (72%) |

The data in Table 28 show there were 61 students who participated in CAPPS and 63 students who did not participate in CAPPS for Year 2. For Year 3, there were 40 students who participated in CAPPS and 68 students who did not participate in CAPPS.
During Year 4, there were 39 students who participated in CAPPS and 100 students who did not participate in CAPPS. Table 28 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 29 shows output for Grade 7 in Mathematics. Data are displayed for Year 2.

Table 29

*Chi-squared Test: Grade 7 Mathematics Year 2*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>5.422</td>
<td>3</td>
<td>.066</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>5.986</td>
<td>3</td>
<td>.050</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>124</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 2 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=124)=5.42, p = .066$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s mathematics scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 2.
Table 30 shows output for Grade 7 in Mathematics. Data are displayed for Year 3.

Table 30

Chi-squared Test: Grade 7 Mathematics Year 3

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>16.495</td>
<td>3</td>
<td>&lt;.001*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>18.59</td>
<td>3</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>108</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 3 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=108)=16.50, p < .001$. When students participated in the after-school program proficiency levels were advanced 18% of the time, proficient 15% of the time, basic 40% of the time, and minimal 28% of the time. The effect size (phi) is .391, a medium to large effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 31 shows output for Grade 7 in Mathematics. Data are displayed for Year 4.
Table 31

Chi-squared Test: Grade 7 Mathematics Year 4

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>5.966</td>
<td>3</td>
<td>.113</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.158</td>
<td>3</td>
<td>.104</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>139</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 4 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=139)=5.97, p = .113$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s mathematics scores in Grade 7 when compared to students who were not enrolled in the CAPPS program during Year 4.

Grade 8 Mathematics

Table 32 shows data for Grade 8 in Mathematics. Data are displayed for Years 2, 3, and 4.
Table 32

Frequency/Percentage of Proficiency Levels in Mathematics MCT2 for Grade 8

<table>
<thead>
<tr>
<th>Year</th>
<th>Proficiency Level</th>
<th>CAPPS</th>
<th>Non-CAPPS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimal</td>
<td>Basic</td>
<td>Proficient</td>
<td>Advanced</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6 (11%)</td>
<td>18 (32%)</td>
<td>26 (46%)</td>
<td>6 (11%)</td>
</tr>
<tr>
<td></td>
<td>17 (39%)</td>
<td>12 (27%)</td>
<td>12 (27%)</td>
<td>3 (7%)</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 (12%)</td>
<td>2 (12%)</td>
<td>11 (64%)</td>
<td>2 (12%)</td>
</tr>
<tr>
<td></td>
<td>14 (19%)</td>
<td>37 (49%)</td>
<td>22 (29%)</td>
<td>1 (3%)</td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 (17%)</td>
<td>4 (22%)</td>
<td>11 (61%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td></td>
<td>8 (9%)</td>
<td>39 (45%)</td>
<td>35 (40%)</td>
<td>5 (6%)</td>
</tr>
</tbody>
</table>

The data in Table 32 show there were 56 students who participated in CAPPS and 44 students who did not participate in CAPPS for Year 2. For Year 3, there were 17 students who participated in CAPPS and 75 students who did not participate in CAPPS. During Year 4, there were 18 students who participated in CAPPS and 87 students who did not participate in CAPPS. Table 32 also demonstrated a larger percentage of CAPPS students scoring proficient and advanced than Non-CAPPS students for Years 2-4.

A Chi-squared test was utilized to examine the effect regular participation in an after-school program had on proficiency levels in reading on the MCT2 compared to students who did not attend the after-school program.

Table 33 shows output for Grade 8 in Mathematics. Data are displayed for Year 2.
Table 33

**Chi-squared Test: Grade 8 Mathematics Year 2**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>11.342</td>
<td>3</td>
<td>.010*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>11.548</td>
<td>3</td>
<td>.009</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<.05

The Year 2 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=100)=11.34, p = .010$. When students participated in the after-school program proficiency levels were advanced 10% of the time, proficient 46% of the time, basic 32% of the time, and minimal 11% of the time. The effect size (phi) is .337, a medium to large effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 2.

Table 34 shows output for Grade 8 in Mathematics. Data are displayed for Year 3.
Table 34

*Chi-squared Test: Grade 8 Mathematics Year 3*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>12.466</td>
<td>3</td>
<td>.006*</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>12.668</td>
<td>3</td>
<td>.005</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>92</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

The Year 3 mathematics proficiency levels were statistically significant demonstrating a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program: $\chi^2(3, N=192)=12.47, p = .006$. When students participated in the after-school program proficiency levels were advanced 12% of the time, proficient 65% of the time, basic 12% of the time, and minimal 12% of the time. The effect size (phi) is .368, a medium to large effect.

The CAPPS program data showed a statistically significant effect on the student’s mathematics scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 3.

Table 35 shows output for Grade 8 in Mathematics. Data are displayed for Year 4.
Table 35

*Chi-squared Test: Grade 8 Mathematics Year 4*

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Sig. (2 sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi Square</td>
<td>5.175</td>
<td>3</td>
<td>.159</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>6.097</td>
<td>3</td>
<td>.107</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Year 4 mathematics proficiency levels were not statistically significant: $\chi^2(3, N=105)=5.18, p = .159$, demonstrating a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

The CAPPS program data did not show a statistically significant effect on the student’s mathematics scores in Grade 8 when compared to students who were not enrolled in the CAPPS program during Year 3.

**Summary of Findings for Research Question 3**

Analysis of data for research question 3 yielded the following findings: (a) larger percentage of CAPPS students by grade level scoring proficient and advanced compared to Non-CAPPS students for Years 2-4, (b) higher percentage of eligible fifth grade students participated in CAPPS during Year 2 than Years 3 and 4 (55%) when compared to Non-CAPPS participants, (c) higher percentage of eligible sixth grade students participated in CAPPS during Year 3 than Years 2 and 4 (48%) when compared to Non-CAPPS participants, (d) higher percentage of eligible seventh grade students participated in CAPPS during Year 2 than Years 3 and 4 (49%) when compared to Non-CAPPS...
participants, and (e) higher percentage of eligible eighth grade students participated in CAPPS during Year 2 than Years 3 and 4 (56%) when compared to Non-CAPPS participants.

Based on the Chi-squared test results, statistical significance in mathematics was reported for (a) Grade 5 in Year 3: \( \chi^2(3, N=163)=13.86, p = .003 \), (b) Grade 6 in Year 3: \( \chi^2(3, N=157)=15.50, p = .001 \), and Year 4: \( \chi^2(3, N=145)=14.83, p = .002 \). (c) Grade 7 in Year 3: \( \chi^2(3, N=108)=16.50, p = .001 \), and (d) Grade 8 in Year 2: \( \chi^2(3, N=100)=11.34, p = .010 \), and Year 3: \( \chi^2(3, N=192)=12.47, p = .006 \).

Statistically significant findings demonstrated a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program. When findings were not statistically significant, a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.
The major goal of this study was to explore the impact the after-school program’s strategic components (leadership, activities, and partnerships) had on student achievement. Further, the study sought to determine if the after-school program for the LMSD had a positive effect on academic outcomes in the areas of reading and mathematics of students who participated in the after-school program when compared to the academic outcomes of students who did not participate in the after-school program.

This Chapter presents a summary of results, a discussion of the findings, limitations of the study, a general recommendations, and recommendations for future research.

Summary

This study focused on objective one of the 21st CCLC program as cited in the 21st CCLC Non-Regulatory Guidance (USDE, 2003). The first objective of 21st CCLC program is for students “to demonstrate educational and social benefits and exhibit positive behavioral changes” (USDE, 2003 p. 32). The objective for the specific after-school program was for each student who regularly participated in the after-school program to meet or exceed state and local academic achievement standards in reading and mathematics.
In an effort to address the needs of students in the LMSD, personnel incorporated various intervention strategies and programs into their daily school schedules. In an attempt to increase student achievement and to ensure that students were making adequate yearly progress; the LMSD administrators and teachers recognized additional time outside of the regular school day was needed. Accordingly, an after-school program, 21st CCLC, was planned and implemented to assist in improving student achievement.

LMSD has operated an after-school program for four years. While the availability of after-school programs has clearly increased, the efficacy of the programs continues to be debatable at best and untested in certain situations, as is in the case of the LMSD’s after-school program (Witt, 2004). Although the program has been in operation for four years, little empirical data had been analyzed to determine the effectiveness of the after-school program in terms of increasing participating students’ academic achievement. In which case, this study served as a formal assessment of the program for the LMSD.

In order to fully explore the problem of this study, three research questions were developed and used to examine the effects of a specific 21st CCLC after-school program, in a rural Mississippi school district, had on student achievement. The following research questions were used in this study:

1) How do the strategic components (program leadership, activities, and partnerships) of an after-school program impact student achievement?
2) What effect does participation in an after-school program have on reading achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

3) What effect does participation in an after-school program have on mathematics achievements scores as measured by performance on the MCT2 for students in Grades 5-8 in the LMSD?

Analysis of data for research questions 2 and 3 yielded the following findings: (a) larger percentage of CAPPS students by grade level scoring proficient and advanced compared to Non-CAPPS students for Years 2-4, (b) higher percentage of eligible fifth grade students participated in CAPPS during Year 2 than Years 3 and 4 (55%) when compared to Non-CAPPS participants, (c) higher percentage of eligible sixth grade students participated in CAPPS during Year 3 than Years 2 and 4 (48%) when compared to Non-CAPPS participants, (d) higher percentage of eligible seventh grade students participated in CAPPS during Year 2 than Years 3 and 4 (49%) when compared to Non-CAPPS participants, and (e) higher percentage of eligible eighth grade students participated in CAPPS during Year 2 than Years 3 and 4 (56%) when compared to Non-CAPPS participants.

Based on the Chi-squared test results, statistical significance in reading/language was reported for (a) Grade 5 in Year 2: $\chi^2(3, N=190)=30.45, p < .001$, and Year 4: $\chi^2(3, N=150)=9.87, p = .020$, (b) Grade 6 in Year 2: $\chi^2(3, N=145)=13.56, p = .004$, Year 3: $\chi^2(3, N=137)=12.52, p = .014$, and Year 4: $\chi^2(3, N=157)=9.25, p = .026$. (c) Grade 7 in Year 4: $\chi^2(3, N=139)=15.51, p = .001$, and (d) Grade 8 in Year 3: $\chi^2(2, N=92)=15.873, p = .001$. 

101
Statistically significant findings demonstrated a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program. When findings were not statistically significant, a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

Based on the Chi-squared test results, statistical significance in mathematics was reported for (a) Grade 5 in Year 3: $\chi^2(3, N=163)=13.86, p = .003$, (b) Grade 6 in Year 3: $\chi^2(3, N=157)=15.50, p = .001$, and Year 4: $\chi^2(3, N=145)=14.83, p = .002$. (c) Grade 7 in Year 3: $\chi^2(3, N=108)=16.50, p < .001$, and (d) Grade 8 in Year 2: $\chi^2(3, N=100)=11.34, p = .010$, and Year 3: $\chi^2(3, N=192)=12.47, p = .006$.

Statistically significant findings demonstrated a relationship between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

When findings were not statistically significant, a relationship did not exist between student participation and proficiency levels for students who regularly participated in the after-school program compared to students who did not participate in the after-school program.

In conclusion, for reading/language and mathematics, there were a larger percentage of CAPPS students by grade level scoring proficient and advanced compared to Non-CAPPS students for Years 2-4. Based on the Chi-squared test results, statistical significance in reading/language was reported for (a) Grade 5 in Years 2 and 4, (b) Grade
6 in Years 2-4, (c) Grade 7 in Year 4, and (d) Grade 8 in Year 3. Based on the Chi-squared test results, statistical significance in mathematics was reported for (a) Grade 5 in Year 3, (b) Grade 6 in Years 2-4, (c) Grade 7 in Year 3, and (d) Grade 8 in Years 2 and 3.

Statistical significance was reported in both reading/language arts and mathematics in some grades for the same year: Grade 6 Years 3 and 4, and Grade 8 Year 3.

**Discussion**

The findings from the research study determined that strategic components (program leadership, activities, and partnerships) of an after-school program had a positive impact on student achievement. Data were collected through analysis of existing documents related to the after-school program including program-evaluations, evidence of activities and goals, etc. As stated earlier, given the nature of after-school programs as educational organizations, a theory of change for the study of after-school programs as described by Vandell et al. (2005) was an ideal framework used for helping to understand the structural aspects (leadership, activities, and partnerships) and outcome effects (reading and mathematics achievement scores) of the after-school program at the LMSD.

Emerging themes were identified for each strategic component: leadership, activities, and partnerships.

Major themes emerging from the data reviewed of the leadership component revealed that the program director had a tremendous working knowledge, demonstrated strong communication skills, and was strategic in day-to-day operations. The leader’s behavior may be explained by the utilization of a framework for change. Goals and activities were focused with strong collaboration throughout the implementation. The
leadership contributed to the successful implementation of the CAPPS program. A key finding was program growth demonstrated by increased student enrollment for Years 2–4 as evidenced on the continuation reports. Surveys indicated the project director’s collaboration with the superintendent, principals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents improved. The outcome of this collaboration contributed to the positive impact on student achievement for CAPPS students.

The findings from the study are consistent with prior research related to the role of leadership. In prior research, appropriate leadership and supervision were crucial to the effects an after-school program (Foshola, 1998; Grossman et al., 2007; & Covey, 1997). Marzano, Waters, and McNulty (2005) also indicated that leadership is critical to the success of an organization. Marzano et al. argued that an effective leader is the single most influential person because this person sets the tone of the organization, the climate for working, and the level of professionalism and morale of the employees.

Emergent themes from the data reviewed of the activities component were as follows: (a) students were provided with academic tutoring and homework assistance daily, (b) activities were focused on improving student academic performance on state test scores, (c) activities promoted positive character building skills to decrease student discipline issues by initiating a positive reinforcement rewards program to students weekly, (d) activities promoted collaboration between classroom teachers and lead teachers, and (e) activities promoted parental involvement and collaboration.

Bandura’s Social Learning theory helped explain the purpose of providing enrichment activities to students in the after-school program. Enrichment activities
allowed students to learn through observing others. Staff in the after-school program utilized effective modeling strategies that gained the students’ attention; allowed for students’ retention of knowledge; allowed students’ reproduction of content; and motivate students to achieve.

After-school programs promote school achievement and build life skills while utilizing enrichment activities (Olszewski-Kubilius, 2003). Children who spend time in enrichment activities have better grades, better work habits and more positive relationships with their peers (Nellie Mae Education Foundation, 2003). After-school programs give children the opportunity to develop creative thinking, problem-solving, communication and self-direction skills that are linked with success in the workplace (Corporate Voices for Working Families, 2006).

Gagné’s Conditions of Learning helped explain the importance of tutorial strategies provided through the after-school program. Differentiated instruction strategies were utilized recognizing students differ in intellectual skills, cognitive strategies, motor skills and attitudes. In planning the differentiated instructional tutoring strategies, Gagné’s principles are used.

The framework for assessing change is also useful for evaluation planning, continuous learning and improvement, and effective communication among diverse program partners. A critical feature of developing change in after-school programs is to engage local after-school partners, including the program leaders and staff, program participants, their families, and other community members and organizations, in the planning, development, and implementation process.
Partnerships reinforce a positive working relationship with the local schools and district. Emergent themes related to the partnerships component were as follows: (a) partnerships provided resources to enhance student activities as evidenced on continuation reports (b) partnerships provided additional staffing for the after-school program reducing teacher to student ratios as evidenced in PPICS data collection system, (c) partnerships enhanced collaboration with community members and parents, (d) partnerships provided invaluable experiences for teacher candidates.

Higher education institutions, from state universities to community colleges, bring valuable resources to after-school programs. They can bolster students’ aspirations for higher education and help prepare them for college. Higher education institutions partner with after-school programs in a number of ways by (a) providing college students as tutors, mentors or activity leaders; (b) offering training, technical assistance and specialized services to after-school program staff and participants; and (c) contributing to the emerging knowledge base of the field by evaluating after-school programs (Noguera, 1998).

The current study was able to identify statistically significant differences between regular participation in CAPPS compared to students who were eligible to attend CAPPS; however, chose not to attend. Overall, results demonstrated differences in CAPPS and Non-CAPPS participants in reading/language and mathematics on MCT2 when comparing Grades 5-8 during Year 2, 3, and 4 of the after-school program.

Analysis of data for research questions 2 and 3 yielded the following findings: (a) larger percentage of CAPPS students by grade level scoring proficient and advanced compared to Non-CAPPS students for Years 2-4, (b) higher percentage of eligible fifth
grade students participated in CAPPS during Year 2 than Years 3 and 4 (55%) when compared to Non-CAPPS participants, (c) higher percentage of eligible sixth grade students participated in CAPPS during Year 3 than Years 2 and 4 (48%) when compared to Non-CAPPS participants, (d) higher percentage of eligible seventh grade students participated in CAPPS during Year 2 than Years 3 and 4 (49%) when compared to Non-CAPPS participants, and (e) higher percentage of eligible eighth grade students participated in CAPPS during Year 2 than Years 3 and 4 (56%) when compared to Non-CAPPS participants.

Participation in CAPPS proved to be a good predictor of increasing student achievement on MCT2 as demonstrated in Chi-squared results for reading/language. In reading/language across Grades 5–8 for Years 2–4, 7 out of 12 groups (58%) resulted in statistically significant differences in students who attended the CAPPS program compared to those who did not attend the CAPPS program.

Based on the Chi-squared test results, statistical significance in reading/language was reported for (a) Grade 5 in Years 2 and 4, (b) Grade 6 in Years 2-4, (c) Grade 7 in Year 4, and (d) Grade 8 in Year 3.

In mathematics, student participation in CAPPS did not prove to be as good of a predictor of increasing student achievement on MCT2. In mathematics across Grades 5–8 for Years 2-4, 6 out of 12 groups (50%) resulted in statistically significant differences in students who attended the CAPPS program compared to those who did not attend the CAPPS program.
Based on the Chi-squared test results, statistical significance in mathematics was reported for (a) Grade 5 in Year 3, (b) Grade 6 in Years 2-4, (c) Grade 7 in Year 3, and (d) Grade 8 in Years 2 and 3.

Statistical significance was reported in both reading/language arts and mathematics in some grades for the same year: Grade 6 Years 3 and 4, and Grade 8 Year 3.

These results are consistent with other studies that have examined the effects of after-school participation on academic achievement. For example, Brooks, Mojica, and Land (1995) reported that after-school programs can increase academic achievement and safety and reduce negative behaviors such as drug and alcohol use. Massachusetts 2020 and Boston Public Schools (2004) reported that an after-school program increased grades in math and English.

The mixed patterns of findings within grade levels in this research study were also observed in previous studies. In previous studies mixed patterns of findings such as some outcomes improving, some becoming more negative, and some showing no change were observed (Fashola, 1998, Hollister, 2003, Roth, Brooks-Gunn, Murray, & Foster, 1998). For example, Reisner et al. (2004) reported changes in reading test scores but no changes in math test scores.

**Limitations**

The results of this study are generalizable only to the students in the LMSD.

There are two limitations that must be noted in terms of generalizability of the findings. The first limitation was the scores were from a homogeneous group. All of the proficiency levels were those of students that had been deemed academically at risk.
(based on classroom grades and state assessment scores) or economically disadvantaged (based on free-reduced lunch status). In which case, the findings of this study cannot be generalized to populations with different after-school guidelines. The second limitation of this study was that the teachers who provided the tutoring during the after-school program were in some cases the same teachers who taught the students during the regular school day. As a result, they may have had preconceived ideas concerning the students’ academic abilities that might have influenced their interactions with the students. Since this program was funded through special sources, the third limitation was that the findings of this study might not be applicable to programs without special funding.

Implications

By exploring strategic components (leadership, program goals, activities, and partnerships) of the 21st CCLC program, this study will provide implications for educational leaders of insights that can be used to promote and assist 21st CCLC after-school funded programs in Mississippi as well as throughout the country. The study may be useful for those planning and implementing an after-school funded program. This study will provide implications for educational leadership programs to promote strategic leadership strategies in their program.

Recommendations for Further Research

Although many researchers have conducted studies on after-school programs, there is still a need to conduct further research to improve reading/language and mathematics skills among the nation’s students. This study was conducted for students attending the CAPPS program for one year. Longitudinal studies should be conducted to
determine long term effects on students attending after-school programs multiple years. Effects of after-school programs on other grade levels should be investigated. Outcome utilizing other variables such as after-school participation on school attendance, behavior, and classroom grades should be investigated. A study should be conducted to determine time spent on various activities. Strategies to improve after-school settings should be a focus for all stakeholders. Strengthening leadership, increasing quality of activities, and strengthening partnerships should be the focus of the strategies for improvement.
REFERENCES


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543.


31, 2007, from


math tutoring program: University tutors + elementary students = a successful

Baltimore Police Department Division of Planning and Research. (1998). *Juvenile
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doi:10.1007/s10464-010-9301-5


McMurrer_FullReport_CurricAndInstruction_072407.pdf


APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL
April 25, 2013

Leigh Hailey

RE: HRPP Study #13-094: Changing Academic Performance and Promoting Success (CAPPS): Impact on Student Achievement

Dear Ms. Hailey:

This email serves as official documentation that the above referenced project was reviewed and approved via administrative review on 4/25/2013 in accordance with 45 CFR 46.101(b)(4). Continuing review is not necessary for this project. However, in accordance with SOP 01-03 Administrative Review of Applications, a new application must be submitted if the study is ongoing after 5 years from the date of approval. Additionally, any modification to the project must be reviewed and approved by the HRPP prior to implementation. Any failure to adhere to the approved protocol could result in suspension or termination of your project. The HRPP reserves the right, at anytime during the project period, to observe you and the additional researchers on this project.

Please refer to your HRPP number (#13-094) when contacting our office regarding this application.

Thank you for your cooperation and good luck to you in conducting this research project. If you have questions or concerns, please contact me at jroberts@research.msstate.edu or call 662-325-2238.

Finally, we would greatly appreciate your feedback on the HRPP approval process. Please take a few minutes to complete our survey at http://www.surveymonkey.com/s/YZC7QQD.

Sincerely,

Jodi Roberts, Ph.D.
IRB Officer

cc: Dwight Hare (advisor)
APPENDIX B

LETTER OF PERMISSION TO COLLECT DATA
Louisville Municipal School District

William C. Wade, Ed.D., Superintendent
P.O. Box 909 – 112 S. Columbus Ave.
LOUISVILLE, MISSISSIPPI 39339
PHONE (662) 773-3411
FAX (662)773-4013

February 8, 2013

To Whom It May Concern:

I give permission for Leigh Ann Hailey to have access to Louisville Municipal School District’s data pertaining to Changing Academic Performance and Promoting Success (CAPPs) 21st Century Community Learning Centers after-school program for her study. Mrs. Hailey will also have access to any assessment data and discipline information needed on the CAPPs students.

We are currently in our 4th year of the CAPPs program. Therefore, this study will provide the school district with an evaluation of the CAPPs program.

Please let me know if any additional information is needed.

Sincerely,

Dr. William Wade
APPENDIX C

LOGIC MODEL FOR CAPPS AFTER-SCHOOL PROGRAM
**Program:** CAPPS Logic Model

**Situation:** How do the strategic components (program leadership, activities, and partnerships) of an after-school program impact student achievement?

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Tutoring</td>
<td>CAPPS Participants Prinicipals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Homework Assistance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enrichment – Arts, Music, Photography</td>
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<td>Character Education</td>
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<tbody>
<tr>
<td>Increase Attendance in the after-school program.</td>
<td>Increase Collaboration between, principals, lead teachers, teachers, tutors/paraprofessionals, partners, and parents.</td>
<td>Increase MCT2 scores in Reading</td>
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<tr>
<td>Increase completion rate of homework Improve student academic performance on state test scores.</td>
<td>Promote positive character building skills Partnerships provide resources to enhance student activities.</td>
<td>Increase MCT2 scores in Mathematics</td>
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<td>Partnerships provide additional staffing for the after-school program reducing teacher to student ratios.</td>
<td>Partnerships provide invaluable experiences for teacher candidates.</td>
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**Assumptions**

**External Factors**