Impact of an Elementary School Academic Camp on Reading, Writing, and Math Scores

by
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Approval Page

This applied dissertation was submitted by Kowsilla Mangru under the direction of the persons listed below. It was submitted to the Fischler School of Education and Human Services and approved in partial fulfillment of the requirements of the degree of Doctor of Education at Nova Southeastern University.

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Acknowledgments

I dedicate this applied dissertation to my beloved children, Lisa Marie, Jonathan and David, and to my husband, Theodore Jonathan Mangru, for their faith in me and their sacrificial and unconditional love, support, patience, and words of encouragement to make this dream reality. To my mom, Diana, three sisters, Vado, Geeta and Urmilla, and brothers-in-law, especially Perty Ibrahim, thanks for all of your help and support through this doctoral program. Above all, all praises to our Lord and Savior Jesus Christ who makes all things possible. Without His guidance, strength and knowledge, I could not have made this dream reality.

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"Trust in the Lord with all your heart, and lean not unto your own understanding; in all your ways acknowledge him, and He will make your path straight" (Proverbs 3:5-6).
Abstract


The purpose of this study was to examine whether or not student academic performance in reading, writing, and math was impacted as a result of attending the target elementary school academic camp (ESAC). The researcher found that the extended curriculum contributed to a significant increase in student scores on the Florida Comprehensive Achievement Test (FCAT).

The experimental group and the control group were subjected to the same curriculum throughout the regular school day. They used the same texts and had access to similar materials for learning. The experimental group attended ESAC, whereas the control group did not. The researcher focused on the progress made by students in both groups and compared their overall FCAT scores. The researcher also used the responses of parents and teachers to survey instruments in order to measure their perceptions of the effectiveness of ESAC.

Results from the $t$ tests showed that Grade 4 students who were identified as being at risk based on Grade 3 performances and who participated in the ESAC scored significantly better in the reading and writing portions of the standardized tests than they had scored in Grade 3. Results for the control group showed only a significant improvement in writing as measured by the FCAT scores. For the control group, the nonparametric tests indicated a significant improvement from Grade 3 to 4 in reading, math, and writing mean scores on the FCAT, and for the experimental group, these tests indicated a significant improvement in reading and writing mean scores on the FCAT from Grade 3 to 4, but the improvement in mathematics was not significant.

The evaluation of the ESAC determined that the program was a relatively effective means of improving the performance of at-risk students in reading, writing, and math. The researcher documented information learned from the program that might be useful in guiding the development of similar programs in the future at the school site under study as well as at other school sites. She also documented the results of an extensive literature review in the areas of afterschool programs, also known as extended-day programs, and the improvement of academic performance. The writers of the literature recommended that afterschool programs be implemented at an earlier age in the primary grades to eliminate the chance of students being at risk of failure.
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Chapter 1: Introduction

During the 2003-2004 through 2005-2006 school years, multiple achievement problems occurred in the target elementary school. The students' academic performance was inconsistent across all grade levels. Some of the inconsistency in the students' scores affected the school's grade that was assigned by the state department of education. Clearly, the grade left room for improvement in student achievement. Having been prescribed to attend the Elementary School Academic Camp (ESAC), the students in the experimental group had an opportunity to improve their academic performance over that of the students in the control group based on the evidence of Florida Comprehensive Achievement Test (FCAT) scores.

The purpose of this study was to examine whether or not student academic performance in reading, writing, and mathematics had an impact on academic achievement as a result of students attending the academic camp at the target elementary school. The researcher wanted to find out whether this extended curriculum contributed to a significant increase in students' scores on the FCAT.

The experimental group and the control group were subjected to the same curriculum throughout the regular school day. They used the same texts and had access to similar materials for learning. The experimental group attended ESAC, whereas the control group did not. The researcher focused on the progress made by students in both groups and compared their overall FCAT scores. The researcher used the responses of parents and teachers to measure their perceptions of the effectiveness of ESAC.

Background Information

The purpose of this research study was to investigate whether afterschool programs that were conducted in school buildings might be implemented in other
community locations to enhance academic performance of students with low scores. In this school district, the state and federal governments fund most of the afterschool programs, although some are funded by a combination of the three sources. In this case, ESAC is supported by the school. The academic camp focuses chiefly on students who are at risk of being retained or who are at the borderline for failure. These students have difficulty in math, reading, and writing. The number of studies such as those of Zeigler (2001) and of Invernizzi, Rosemary, Juel, and Richards (1997) indicated that afterschool programs that involve reading strategies are capable of spurring children's interest in reading and helping them to enhance their literacy skills. The researcher found that related theories concerning the positive outcomes of afterschool programs are so abundant that, in some instances, they are repetitive in both older and current research.

The writers of the resources explored in this study included those who recognized the benefits of students attending an afterschool program and the impact of the program on their academic achievement. These resources included research articles and information presented by authors from internationally recognized institutions. Although initial data and information were obtained from general and specific sources, the most extensive research was obtained from (a) psychologists; (b) Web sites such as ERIC, Questia, ProQuest, and Google; and (c) educational journals and books.

Posner and Vandell (1994) noted that several studies have indicated the positive benefits for poor urban students who engaged in planned afterschool activities. A large number of such programs have been implemented, ranging from small projects with a single purpose to well-funded comprehensive programs. Steppanen (1993) explained that over 3 million children participate in some type of afterschool program in the nation. She described the conception and procedure of outsized and more structured programs for afterschool programs and the benefits to student academic achievement.
Statement of the Problem

Many schools experiencing achievement problems have tried various methods of remediation to address the dilemma. The researcher reviewed a substantial body of literature to establish the background and importance of the problem. One major factor that contributed to the improvement of these struggling schools was the implementation of programs and curricula before school and after school. According to De Angelis and Rossi (1997) and Posner and Vandell (1994), school-based afterschool programs have increased in number since the mid-1980s. The researcher examined the programs held before school and after school that had been adopted by the target school to assess their impact on student performance.

Witt and Baker (1997) examined several afterschool programs and found that academic programs led to students enhancing their performance. In one study on writing programs, the researchers reported that the programs successfully contributed to improved writing performance of students. According to Bratcher (1997), "The process of learning to write was not a series of stages or steps. Comfort and confidence grew together; competence bread confidence and comfort" (p. 2). Some students needed an outline of a series of steps for reading and writing that would act as a guide. Other students felt some comfort in knowing that they would have a program of work that they could easily follow.

As a result of student achievement problems, the educators at the target school investigated strategies such as academic camps that included writing, reading, and math tutorial programs. This applied dissertation study was conducted on students in the fourth-grade classes of the target elementary school.

The target school became a Title I school at the beginning of the 2004-2005 school
year. The Title I designation grew out of the Elementary and Secondary Education Act of 1995 that was designed to provide federal funding for schools to help students who are behind academically or at risk of falling behind. The target school met that criteria and its leaders made a commitment to improve the children's academic performance in reading, writing, science, and math as well as other areas in the school's curriculum.

The overall FCAT scores in writing, reading, and math of students in the target school dropped significantly in the 2005-2006 school year, thus, causing the school's grade to plummet from an A to a C. The decrease in scores made it necessary to implement academic programs to increase student performance and to improve the overall school grade. Even though all the grade levels that were tested were lacking to a large extent, the researcher found that the students in the fourth grade contributed the most to the decline in the scores. Rees (2000) reported that this problem is a common one: "Nearly 40% of America's fourth graders read below the basic level on national test. . . . These numbers are even bleaker in the inner cities, where 58% of low-income fourth graders nationally cannot read at a basic level" (p. 1).

Students in the target school were involved in academic camps before or after school. Their placement was based on data from standardized tests or teacher observation. For the first time in the 2005-2006 school year, a writing camp was introduced in the mornings to assist in boosting student and, thus, school scores. For this camp, the Mary Lewis Writing Program was adopted by the school. The writing camp operated three times per week from 7:00 a.m. to 8:00 a.m. Other academic camps focused on reading and math and met three times per week after school from 2:30 p.m. to 4:00 p.m.

Nature of the Study

Over the last few years, the target school experienced performance setbacks, as
the students' overall FCAT scores remained inconsistent and unfortunately showed no
evidence of a steady increase in their overall academic performance. As a result, the
researcher found much room for improvement.

From 2003 through 2006, the learning gains based on the scores on the FCAT
showed inconsistent performance (see Table 1). In 2003, the achievement score in
reading was 59%. The score increased to 69% in 2004, decreased to 63% in 2005, and
further decreased to 68% in 2006. In 2003, the score for students in math was 74%. This
increased to 77% in 2004 and declined to 74% in 2005. When compared to 2003 scores,
the writing scores showed a significant decrease in learning gains with a score of 84%, or
Level 3.6 (.1 above the required passing score of 3.5). The scores increased in 2004 to
88%, or Level 3.7, and decreased again in 2005 to 54%, or Level 3.3.

Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Reading</th>
<th>Math</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>59</td>
<td>74</td>
<td>84</td>
</tr>
<tr>
<td>2004</td>
<td>69</td>
<td>77</td>
<td>88</td>
</tr>
<tr>
<td>2005</td>
<td>63</td>
<td>74</td>
<td>54</td>
</tr>
<tr>
<td>2006</td>
<td>68</td>
<td>76</td>
<td>91</td>
</tr>
</tbody>
</table>

The learning outcome showed that the academic performance of students needed to
improve in a consistent manner. The researcher believed that student performance might
improve by consistent attendance in the afterschool programs and that the students' use of
extended curriculum might result in improved and more consistent FCAT scores.
Improving student performance would ensure the overall performance of the target school.
Purpose of the Study

The purpose of this study was to investigate the effects of the ESAC at the target school of at-risk students based on their reading, writing, and math scores on the FCAT. The FCAT scores in these subject areas from 2003 through 2006 were average and inconsistent (see Table 2). They ranged from a low of Level 1 to a high of Level 5.

Table 2

Reading and Math Scores on Florida Comprehensive Achievement Test for Grades 3-5 by Percentage, 2003-2006

<table>
<thead>
<tr>
<th>Grade</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>64</td>
<td>59</td>
<td>64</td>
<td>77</td>
</tr>
<tr>
<td>4</td>
<td>63</td>
<td>65</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>58</td>
<td>54</td>
<td>61</td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>63</td>
<td>59</td>
<td>60</td>
<td>82</td>
</tr>
<tr>
<td>4</td>
<td>65</td>
<td>67</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>5</td>
<td>67</td>
<td>53</td>
<td>61</td>
<td>55</td>
</tr>
</tbody>
</table>

In 2003, only 64% of the students in Grades 3 through 5 who were tested in reading on the FCAT scored at a Level 3 or higher, whereas 63% scored at a Level 3 or higher in math. In 2004, the performance of the students increased to 68% with scores at Level 3 or higher in reading and to 64% with scores at Level 3 or higher in math.

In 2005, however, the reading scores dropped with only 66% of the students scoring at Level 3 or higher; in math, 67% of the students scored at Level 3 or higher. In
2006, 67% of the students scored at Level 3 or higher in reading, and 68% of students scored at Level 3 or higher in math. Math scores slightly improved with only 65% of students scoring at Level 3 or higher. For 2003 through 2006, the learning gains in reading showed scores of 59%, 69%, 63% and 68%, respectively. In math, the learning gains were 74%, 77%, 74% and 76% for the same years, respectively.

The scores in writing took the greatest plunge. In 2003, the students in Grades 3 through 5 earned 84 points in writing, a score that was equivalent to a level of 3.6. In 2004, the points earned in writing rose to 88%, a score that was equal to an average grade of 3.7. In 2005, the number of writing points declined alarmingly to 54, and the overall average grade dropped to 3.3. The last score failed to meet the 3.5 average that was required for an overall passing grade. In 2006, the writing scores increased to 91 points, or equal to an average grade of 4.0.

Demographics and Organization Characteristics

As reported by the school board's Web site, the total enrollment in the target school was 1,063 students in kindergarten through Grade 5. Of this total, 556 students were boys (56%) and 507 were girls (48%). As of February 23, 2006, the racial and ethnic makeup was as follows: 798 Black non-Hispanic, 158 Hispanic, 48 multiracial, 30 Asian or Pacific Islander, and 28 White non-Hispanic, and 1 American Indian or Alaskan Native. In addition, 517 students (50%) received free or reduced-price lunch benefits, and 55 students (5%) attended English second-language programs.

Summary of Achievement Levels

The Florida Department of Education reported the FCAT scoring data. Some of which were reflected in the school summary of FCAT scores for reading, mathematics, and writing for Grades 3 through 5 in the target school. The FCAT summary data from the student scores for reading, mathematics, and writing for these grades in the target school
indicated the number of test takers, the mean scale scores, the mean developmental scale scores, the percentage of students scoring in each achievement level, and the percentage of students scoring at Level 3 and above. The levels were reported on a scale of 1 through 5, with 1 being the lowest and 5 the highest. Students performing on or above grade level achieved a score of Level 3 or above. The researcher analyzed the Grade 3 reading and math scores on the FCAT by achievement level for 3 school years (see Table 3).

Table 3

*Reading and Math Scores and Achievement Levels on Florida Comprehensive Achievement Test for Grade 3 by Number and Percentage*

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th></th>
<th>Level 2</th>
<th></th>
<th>Level 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>175</td>
<td>29</td>
<td>21</td>
<td>12</td>
<td>103</td>
<td>59</td>
</tr>
<tr>
<td>2004-2005</td>
<td>162</td>
<td>20</td>
<td>26</td>
<td>16</td>
<td>104</td>
<td>64</td>
</tr>
<tr>
<td>2005-2006</td>
<td>197</td>
<td>11</td>
<td>25</td>
<td>13</td>
<td>151</td>
<td>77</td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>175</td>
<td>22</td>
<td>45</td>
<td>26</td>
<td>92</td>
<td>93</td>
</tr>
<tr>
<td>2004-2005</td>
<td>162</td>
<td>15</td>
<td>41</td>
<td>25</td>
<td>97</td>
<td>60</td>
</tr>
<tr>
<td>2005-2006</td>
<td>197</td>
<td>7</td>
<td>21</td>
<td>11</td>
<td>161</td>
<td>82</td>
</tr>
</tbody>
</table>

*Note.* No. = total test takers.

The percentage of third-grade reading scores in reading in Level 3 increased from 59% in 2003-2004 to 64% in 2004-2005 and to 77% in 2005-2006. However, the percentage of those scoring at Level 3 in math fluctuated from 93% to 60% to 82% in the same years, respectively.
The researcher analyzed the Grade 4 reading and math scores on the FCAT by achievement level in number and percentage of students for 3 school years (see Table 4). In contrast to third graders, the percentage of fourth graders scoring at Level 3 in reading was static from 65% in 2003-2004 to 64% in 2005-2006. The percentage of fourth graders scoring at Level 3 in math began at 67% in 2003-2004, dipped to 59% in 2004-2005, and then rose to 68% in 2005-2006.

Table 4

*Reading and Math Scores and Achievement Levels on Florida Comprehensive Achievement Test for Grade 4 by Number and Percentage*

<table>
<thead>
<tr>
<th>Year</th>
<th>Reading</th>
<th></th>
<th></th>
<th></th>
<th>Math</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td></td>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>2003-2004</td>
<td>147</td>
<td>22</td>
<td>15</td>
<td>29</td>
<td>20</td>
<td>96</td>
<td>65</td>
</tr>
<tr>
<td>2004-2005</td>
<td>197</td>
<td>41</td>
<td>21</td>
<td>30</td>
<td>15</td>
<td>128</td>
<td>65</td>
</tr>
<tr>
<td>2005-2006</td>
<td>157</td>
<td>23</td>
<td>15</td>
<td>32</td>
<td>20</td>
<td>99</td>
<td>64</td>
</tr>
</tbody>
</table>

*Note. No. = total test takers.*

The data in Table 5 represented the combined mean writing scores on the FCAT of the total number of Grade 4 test takers for 4 years. The data in Table 6 indicated the Grade 5 reading and math scores on the FCAT by achievement level for three school years.
Table 5

*Writing Mean Scores on Florida Comprehensive Achievement Test for Grade 4*

<table>
<thead>
<tr>
<th>Year</th>
<th>No.</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>152</td>
<td>3.6</td>
</tr>
<tr>
<td>2004</td>
<td>147</td>
<td>3.7</td>
</tr>
<tr>
<td>2005</td>
<td>197</td>
<td>3.3</td>
</tr>
<tr>
<td>2006</td>
<td>157</td>
<td>4.0</td>
</tr>
</tbody>
</table>

*Note.* No. = total test takers; M = combined mean.

Table 6

*Reading and Math Scores and Achievement Levels on Florida Comprehensive Achievement Test for Grade 5 by Number and Percentage*

<table>
<thead>
<tr>
<th>Year</th>
<th>No.</th>
<th>Level 1</th>
<th></th>
<th>No.</th>
<th>Level 2</th>
<th></th>
<th>No.</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>No.</td>
<td>%</td>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>145</td>
<td>33 23</td>
<td></td>
<td>28 19</td>
<td></td>
<td>84 58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004-2005</td>
<td>161</td>
<td>29 18</td>
<td></td>
<td>45 28</td>
<td></td>
<td>87 54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-2006</td>
<td>178</td>
<td>24 13</td>
<td></td>
<td>43 29</td>
<td></td>
<td>109 61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003-2004</td>
<td>145</td>
<td>29 20</td>
<td></td>
<td>39 27</td>
<td></td>
<td>77 53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004-2005</td>
<td>160</td>
<td>26 16</td>
<td></td>
<td>37 23</td>
<td></td>
<td>98 61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005-2006</td>
<td>178</td>
<td>26 15</td>
<td></td>
<td>52 29</td>
<td></td>
<td>98 55</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* No. = total test takers.
Culture of the School, School System, and Community

The target school is 16 years old and is centrally located in a fast-developing area. It became a Title I school with a growing population of students from lower socioeconomic strata, arguably a contributing factor to the students' poor academic performance. Considine and Zappala (2002) described Graetz's study about the relationship of socioeconomic status and student achievement as follows:

The relationship between family socioeconomic status (SES) and the academic performance of children is well established in sociological research. (1) While there is disagreement over how best to measure SES, most studies indicate that children from low SES families do not perform as well as they potentially could at school compared to children from high SES families. (p. 1)

The socioeconomic status of the school reflects the socioeconomic status of the community. Students' parents have to work long hours doing multiple jobs to earn an income, and the children spend long hours at home with no supervision.

Internal influences. In the target school, parents and teachers are invaluable stakeholders who play significant roles in the education of students. The staff members often work in collaboration with parents to ensure that the students maximize their performance. Two of the chief stakeholders are the principal and vice principal. They play a fundamental role in exploring all possible areas to ensure that students are afforded a variety of opportunities to achieve their goals. The implementation of ESAC was sanctioned by the administrators in the pursuit of student academic achievement. The researcher's role in the target school included multiple duties such as safety and discipline; teacher of second- and fourth-grade classes; and teacher of afterschool academic camps in reading, writing, and math.

External influences. Any future changes made by the board of education or by the state have been classified as potential external influences on the intervention. Possible
changes in the Sunshine State Standards would have an impact on the approach of teachers and parents in response to changes in the criteria for promotion. For instance, multiple grading criteria for promotion--such as conduct, classroom assignment, homework, and class participation--in place of solely using standardized testing for student promotion would have an impact. Multiple testing during the year rather than once a year testing would relieve some of the pressure on students to perform well academically and, in turn, might affect testing outcomes.

Research Questions

Afterschool programs are increasingly viewed as one viable way of bridging the gap between the end of the school day and the time parents get home from work. Research-based strategies, according to de Kanter, Williams, Cohen, and Stonewall (2000), have demonstrated that afterschool programs are in great demand across the country and are popular as well as constructive opportunities for low achievers to learn and grow. Fashola (1998) indicated that afterschool programs that incorporate extracurricular activities to enhance academic achievement benefit students and parents.

The following research questions were investigated in this research study:

1. Will fourth-grade students who participated in the ESAC score better in the reading portion of the standardized test than the control group as measured by the FCAT scores?

2. Will fourth-grade students who participated in the ESAC score better in the math portion of the standardized test than the control group as measured by the FCAT scores?

3. Will fourth-grade students who participated in the ESAC score better in the writing portion of the standardized test than the control group as measured by the FCAT scores?
scores?

4. How will parents of fourth-grade students who attended the ESAC assess the academic growth, weaknesses and strength of the ESAC?

5. How will teachers of fourth-grade students assess the ESAC, and what recommendations will be made for enhancement of the ESAC?

Definition of Terms

For the purpose of this research study, the following key terms were defined.

Academic achievement. This term refers to the performance of students who demonstrate or maintain progress at or above grade level standards in reading, math, and writing.

Tutoring. This process involves a teacher or instructor directing learning, schooling, coaching, or training of students. The instruction or activity may be conducted during or after school.

Extracurricular activities. These are additional academic activities or other activities beyond regular curriculum activities done in school.

Extended day. This concept refers to hours added to a regular school day that lengthens the school day.

Afterschool programs. These programs involve disciplines such as reading, writing, and math or activities that are offered to students after school.

Elementary school students. This term refers to students from kindergarten through Grade 5 and sometimes Grade 6.

Expected Outcomes

The researcher anticipated the following five outcomes of the intervention:

1. The first outcome stated, In the 2006-2007 school years, the students in the
experimental group who participate in the ESAC will score better on the reading portion of standardized tests than the control group as measured by FCAT scores. Morris, Shaw, and Perney (1990) found that, 8 months after its implementation, an afterschool tutoring program showed that students increased or improved their reading level by one level or 10 points or the equivalent of 1 year.

2. The second outcome stated, Students in the experimental group who participate in the ESAC will score greater on the writing portion of the standardized test than the control group as measured by FCAT scores. Hock, Pulvers, Deshler, and Schumaker (2001) found that tutoring programs held before school and after school may transform students' academic failure to academic success. These four researchers asserted that creating an efficient afterschool curriculum is an effective way to enhance student performance.

3. The third outcome stated, In the 2006-2007 school years, students in the experimental group who participate in ESAC will score better on the math portion of standardized tests than the control group as measured by FCAT scores. Witt and Baker (1997) investigated the academic results of students in Grades 3 through 6 who attended an academic program and those who did not. By the end of the school year, they found considerable differences in the reading, science, math, and language arts grades of the two groups.

4. The fourth outcome stated, Parents of students in ESAC will be able to analyze the strengths and weaknesses and will have input into improving the program as measured by the Parent Academic Growth Survey. Posner and Vandell (1994) affirmed that not only are afterschool programs rapidly increasing, but also they are getting strong support from parents and families across the country as they become more aware of the
significant benefits that afterschool programs provide.

5. The fifth outcome stated, Teachers of students who participate in the ESAC will have the opportunity to analyze and evaluate the program and to make recommendations for enhancements of the program as measured by the teachers' responses to the Educator Academic Growth Survey. Witt (2001) noted that, as students in afterschool academic programs are exposed to a number of activities unavailable during the regular school day, they usually have more opportunities for growth and learning. The students have a greater amount of time for individual attention from teachers because of the smaller group settings. Teachers, more often than not, consider afterschool programs a necessity and believe that children require an environment where they may be engaged in daily structured activities after school.

Summary

In this chapter, the researcher discussed the background and nature of the study including its problem and purpose and explored the theoretical framework, research questions, definition of terms, and the anticipated outcomes of the study. The researcher believed that evaluating the impact of an elementary school academic program would be a means of enhancing the academic achievement of at-risk students. In turn, the improvement of test scores of at-risk students would eliminate the inconsistency of the school's grade.
Chapter 2: Review of Related Literature

The purpose of this research study was to investigate whether afterschool programs, also known as extended-day programs, conducted in school buildings might be implemented in other community locations to enhance academic performance for students with low scores. Most of the afterschool programs in the district were funded by the school district, state government, and federal government; some programs were funded by a combination of the three sources. Vandell and Shumow (1999) reported, "A 1991 national study found that 66% of afterschool programs were operated by nonprofit organization such as public schools (28%), private organization (26%), government agencies (5%) and religious groups (6%)" (p. 71). In this case, ESAC was supported by the school and chiefly focused on students who were at risk of being retained or who were at the borderline for failure. These students had difficulty in math, reading, and writing. The ESAC was administered in small groups of 8 to 10 students.

The number of studies and related theories concerning the positive outcomes of afterschool programs are abundant and, in some instances, are repetitive in both older and current research. Fashola (1998) reported that afterschool and extended-school programs are now being seen as a means of improving students' academic performance; providing opportunities for academic enrichment; and providing social, cultural, and recreation activities. Holloway (2000) stated, "Extracurricular activities provided students with an academic safety net" (p. 88).

The resources explored in this applied dissertation study included those whose writers recognized the benefits of students attending an afterschool program and the impact on students' academic achievement. These resources included research articles and information presented by authors from internationally recognized institutions.
Although initial data and information were obtained from general and specific sources, the most extensive research was obtained from (a) psychologists; (b) Web sites such as ERIC, Questia, ProQuest, and Google; and (c) educational journals and books.

Posner and Vandell (1994) noted that several studies have indicated the positive benefits for poor urban students who engage in planned afterschool activities. A large number of such programs have been implemented, ranging from small projects with a single purpose to well-funded comprehensive programs. Steppanen (1993) explained that over 3 million children participate in some type of afterschool program in the nation. She described the conception and procedure of outsized and more structured programs for afterschool programs and their benefits to student academic achievement.

This researcher considered the immediate affect of an afterschool program and the impact on student achievement. She explored the following concepts during the review of related literature: (a) implementation of afterschool programs, (b) academic achievement, (c) reading achievement, (d) mathematical achievement, (e) writing achievement, (f) at-risk students, and (g) a summary.

*Implementation of Afterschool Program*

Many studies have shown that the implementation of academic programs before or after school should result in a significant improvement in student achievement. Witt and Baker (1997) examined the disparities found between students in Grades 3 through 6 who participated in an academic program and those who did not. By the end of the school year, students achieved considerably different scores in reading, science, math, and language grades.

Witt and Baker (1997) found a divergence in the overall self-esteem of the students. For all significant variables, students appeared more positively affected more
often when they participated in the afterschool programs. Given that, the majority of the program leaders in the programs studied during the literature review were teachers, the researcher found that students appeared to be benefiting more from scholastic role models who might be less available in their homes or in their communities. Most of the program leaders tried to use the afterschool activities to provide quality contact time and highlight the linkage between fun and learning.

Lewis (2000) discussed students from the inner city who benefited greatly from afterschool programs and argued that not only the children profited by being helped academically but also the community:

The ways many youngsters, especially those in the inner city, filled the empty hours after school has led to much greater public investment at all levels in after-school programs… using after-school time to boost student achievement… the results were the biggest movement in education since "Title I" was launched more than three decades ago. (p. 1)

Afterschool programs have played an invaluable role in the lives of students coming from low-income families. Witt and Baker (1997) pointed out that Egeland, Jacobvitz, and Sroufe asserted that developing afterschool programs in schools serve large percentages of low-income and unemployed parents. The researchers noted that these two critical factors have to be taken into account because they negatively affect children being able to adapt to the school environment.

Nationally, various groups and stakeholders have often contributed their input with the intent of improving student performance in various academic areas. One key example was a bipartisan Congress that passed the 1997 America Reads Challenge Act under former President Clinton for the purpose of enhancing students' literacy skills. One of the key objectives of the act is the employment of tutors who support instruction given throughout the regular school day. In this way, students who are in danger of failing math
and reading are being assisted to succeed academically.

Some researchers have noted that the interest in afterschool programs has increased significantly over the years. Garner, Gillingham, and Zhao (2002) made the following comments about a study concerning federally funded afterschool programs:

In 1997, the 21st Century Community of Learning Centers, . . . a federal initiative, was funded for forty million dollars ($40M) the first year and by the year 2001 it had increased its funding to one billion dollars ($1 Billion) for after-school and summer-school programs. This funding allowed for the implementation of after-school programs in high-poverty schools. Prior to this funding, many after-school programs were supported by and housed in community organizations and churches. After-school programs have become more important as educators and community leaders struggle to find ways to provide students with supervision and learning opportunities during the after-school hours. (p. 94)

According to Hawken and Jacknowitz (2001), the American public is developing an increased awareness of the problem and is focusing on the manner in which students use their time during afterschool hours. The two researchers contended that the progression toward afterschool programs is a way of enhancing academic performance:

The number of after-school programs has steadily risen over the past decade. As of the late 1990s, one of every six children aged six to twelve with employed mothers were participating in a before or after-school program. Increased federal and state funding suggests that the number of such programs will increase in the coming years . . . given the proliferation of after-school programs. A greater premium is bound to be placed on information that helps in the design, selection, and management of such programs. (p. iii)

Hamovitch and Jacknowitz (1997) examined the need for academic programs and found an increased demand for various educational plans to assist students who are struggling intellectually. The researcher further asserted that, despite the costs to the public, people usually endorse these academic programs:

In the years since the early 1960s, there has been an explosion in the number and types of programs that try to assist students who are having difficulty in schools, or who are labeled as being at risk of having difficulty in the future. These compensatory education programs seek to remedy a problem or deficit that identifies students who fall into this category. It appears that the public support
these measures, as they are allocate readily available significant government resources. (p. 1)

Vandell and Shumow (1999) examined the success of students who participated in afterschool programs and noted that their performance was much higher than that of their nonparticipating fellow classmates:

After-school care . . . revealed that third graders who spent more time than their peers in enrichment activities received better grades in conduct and were reported by their teachers to have better work habits, better relationships with their peers and better emotional adjustment. (p. 69)

The number of afterschool programs in various areas has increased over time as more and more people are seeing the importance and effectiveness of an extended-day curriculum. Zhang and Byrd (2005) and Halpern (1999) noted that, in addition to schools, other organizations have adopted afterschool programs such as religious institutions, museums, libraries, boys and girls clubs, youth organizations, community centers, parks, and recreational facilities. Zhang and Byrd reported, "It is currently estimated that approximately 25 to 30 percent of American youths spend three and five afternoons each week in organized afterschool programs" (p. 1). Extended-day curricular programs have also produced multiple benefits that have contributed to overall academic enhancement of young people. Garner et al. (2002) wrote that the benefits of afterschool programs in (a) providing child care after school; (b) preventing students being involved in drugs and criminal activity; and (c) helping students to complete homework, attend school, and improve their academic performance.

Schools across the nation have been promoting afterschool programs more and more due to the effectiveness of student performance academically and behaviorally at home and schools. Dryfoos (1999) reported the success of a Los Angeles program:

An after-school enrichment program in twenty-four (24) Los Angeles elementary
schools compared outcomes for eighty (80) students who participated in an after-school program for two years with sixty six (66) non-participants. Seventy five percent (75%) of the children liked school more after participating in the program: their parents reported less tension at home; teachers reported improved behaviors; students' grades improved; and school-based crime decreased by forty to sixty percent (40% to 60%) in the participating schools. (p. 123)

The support for afterschool programs has continued to be crucial and helpful to students especially in the low-income families. Halpern (1999) advised, "Currently, after-school programs serving low-income children face increasing pressure to play a role in helping those children who acquire basic literacy skills and achieve school success" (p. 92).

The number of afterschool programs is increasing rapidly and receiving stronger support from families across the country. More and more families are beginning to see the importance and recognize the remarkable benefits that these programs can provide for students. Schwartz (1996) pointed out that Posner and Vandell found that many afterschool programs have been implemented including small single-purpose programs and large comprehensive programs.

**Academic Achievement**

Afterschool programs have been proven to improve academic achievement, keep kids safe, and help working families. Hamilton and Klein (1998) stated, "Fourth-graders in afterschool programs are supported by Foundation Incorporation. The Philadelphia area out-performed comparison students in reading, language, arts and math" (p. 1).

More and more research has continued to support academic achievement or academic performances of students who attend afterschool programs. Writers of a report from the U.S. Department of Education (2000) contended, "Children and youth who regularly attend high quality afterschool programs have better grades and conduct in
school, more academic and enrichment opportunities, better peer relations and emotional adjustment and lower incidences of drug use, violence and pregnancy” (p. 3). In a number of early studies of single programs, benefits were found that researchers attributed to program participation. A report conducted by Peter D. Hart Research Associates (1999) on an educational survey poll indicated the following findings:

High school youth in after-school programs are at least 5 to 10 percent more likely to earn As and Bs; have attended a cultural event or visited a museum in the past month. They indicated that they love school or like school a lot; believe being a good student is important; say their schools are preparing them very well for college and plan to continue their education after graduation (p. 5)

Afterschool programs are created to enhance students' educational and academic performances. Fashola (1998) maintained that time after school may be used productively:

Time after school is prime time for the implementation of programs to complement, enhance and enrich what happens during the regular school day. Effective extended school-day and after-school programs are capable of addressing three developmental needs of the whole child: academic, recreational and cultural. (p. 66)

Parents continue to see the importance of afterschool programs because of the positive outcomes that they see in their children academically and socially. Hock et al. (2001) identified before and afterschool tutoring programs as having the potential to turn academic failure to academic success. Thus, establishing effective afterschool programs is an excellent way to help children expand their learning and improve their reading. Such afterschool programs offer a selection of activities that are not always available during the customary school day and provide students with opportunities for growth and learning that they might not discover elsewhere. Another beneficial factor is the individual attention that students receive from teachers because of the smaller number of students in the classes and activities.
Witt (2001) reported that the response to a nationwide survey showed that about 800 participants (82%) considered afterschool programs a necessity. In addition, 69% of the participants thought that the numbers of available programs or slots in the programs were insufficient, and about 92% of the participants strongly believed that children needed a place where they might engage in structured activities in an afterschool program on a daily basis.

Afterschool programs may enhance children's academic achievement. Chung, Gannett and La Perla (2004) noted the following benefits for students attending afterschool programs:

[1.] Show increased interest and ability in reading  
[2.] Develop new skills and interests  
[3.] Show improved school attendance, increased engagement in school, and reduce dropout rate  
[4.] Turn in more and better quality homework and can spend more time on task  
[5.] Are held back or placed in special education class less frequently  
[6.] Show higher aspirations for the future, including intention to complete high school and go to college. (p. 2)

Gerber (1996) indicated that extracurricular activities contribute to the development of the whole individual and have a positive indirect impact on academic achievement through increased identification with school, self-esteem, and self-concept. The researcher found that students who participated in extracurricular activities have higher social and academic self-concepts. Cosden, Morrison, Gutierrez, and Brown (2004) provided the following tips for teachers of afterschool programs: "Focus on how children spend their time after-school and how homework, as well as other extracurricular activities, can contribute to school success. . . . Structured after-school activities have also been associated with higher educational outcomes" (p. 1).

Schrenko (1998) reported that the Georgia Department of Education has indicated
the importance of afterschool programs and their effectiveness in assisting students to improve academically. Thus, department leaders have promoted afterschool programs by offering financial assistance and grants to encourage public and nonpublic agencies to promote learning for students after school. Schrenko further explained the Georgia program as follows:

The Georgia Department of Education is offering to agencies with either public or private affiliations competitive grant funding for after school reading program. The purpose of Georgia's Reading Challenge Program is to provide quality after-school reading program for students in grades four through eight with opportunities to improve reading skills and enhance their interest in reading to increase levels of reading achievement for participating students; to improve school attendance of participating students; to improve academic performances of participating students; to increase participation by students in supervised academic, educational, community service, or other special-focused activities to improve participating students meaningful, enjoyable after-school activities. (pp. 4-5)

In a report on a decade of results, Huang, Gribbons, Kim, Lee, and Baker (2000) indicated, "Higher levels of participation in LA's BEST [Better Educated Students for Tomorrow] after-school program led to better subsequent school attendance, which in turn related to higher academic achievement on standardize tests of mathematics, reading and language arts" (p. 7). Limited-English proficient students who participated in the LA's BEST program were more likely to be redesignated as English proficient than their nonparticipating peers.

Quality afterschool programs emphasize enjoyable, activity-based learning that reinforces the knowledge and skills needed for in-school success. Afterschool programs promote positive learning and relationships among children and adult. They create an encouraging environment for children to interact with each other and provide opportunities for children to make decisions and learn leadership skills.

Fletcher and Padover (2003) reported that, in a study done by the University of
California in Irvine, afterschool programs are making a difference, especially in improving student academic performances and are an exceptionally cost-effective approach to supporting school district goals. Students in the lowest quartile have increased their reading and math test scores by more than twice that of their peers not enrolled in afterschool programs. The real value of afterschool programs lies in their potential for providing support and opportunities for children and young people to strengthen their skills and competencies.

When evaluating an afterschool tutoring program, Morris et al. (1990) found that, after only 8 months, students who participated in an afterschool tutoring program gained or improved their reading by one level or 10 points. This amounted to 1 year of overall growth in reading. They pointed out, "Students reading at the 1-2 levels in September (10 points) but at the 2-2 levels in May (20 points), demonstrated a 10 point, or 1 year, gain in achievement" (p. 141).

Posner and Vandell (1994) observed children who invested time in afterschool programs. Teachers reported that these children developed better study habits, associated better with adults, and demonstrated academic improvement:

Children who attended after school programs spent more time on homework and enrichment activities, more time actively involved with adults, and less time in unsupervised outside play than children in mother care, informal adult supervision (babysitting), or self-care. How children spent their time made a difference in their academic and social functioning. Time in enrichment activities was associated with better grades, work habits, adjustment and relationships with peers, while time with adults was associated with improved conduct ratings by teachers and better grades in school. (p. 440)

Miller (2003) anticipated that afterschool programs would (a) provide an avenue for engaging students in active learning and for improving their academic achievement, (b) enhance students' performances in reading, (c) provide students with more individual
attention, and (d) engage students and their teachers in small groups. In addition, Miller contended that teachers in afterschool programs have developed a number of creative strategies to assist students in learning and in applying knowledge that they have learned:

Much remains to be learned about the effects of after school programs, but there is sufficient evidence from both small and large evaluations--from developmental research studies and studies of children of different ages in different types of program--that after-school programs can and do make a positive difference in the lives of young people. Not surprisingly, the effects of program participation are strongest for those students who need help most and have the fewest options. The evidence that dosage matters--those who attend the most hours over the most years benefit more than participants who come less often or over a short period of time--is a strong indicator that interschool program make a difference. (p. 59)

Programs held before school and after school continue to impact student academic achievement and are being identified as having the potential to help students to excel in more public and private schools. The researcher's review of related literature indicated that, since 1987, school-based afterschool programs have increased in number and effectiveness. Regardless of the organization, public or private schools, afterschool programs are designed to achieve several goals.

Schwendiman and Fager (1999) contended in their study that afterschool programs may have farreaching benefits, though not always immediately evident. The benefits for students include enhanced learning, improved health, increased exposure to career choices, and enhanced social and psychological development. Afterschool programs may play a large role in improving student achievement. Whether through target academic activities or indirect activities that positively motivate them, students' chances of improving their school performance increase when they are actively engaged in a structured afterschool program. Schwendiman and Fager advocated some of the specific student learning benefits:

[1.] Increased achievement in math, reading and other academic subjects.
[2.] Enhanced reading ability and motivation, and greater self confidence in reading.
[3.] Improved school attendance and reduce drop-out rate.
[4.] Completion of more and better quality homework.
[5.] Reduce in-grade retention and placement in special education. (p. 18)

Reading Achievement

Learning to read is a complex process from the beginning of most children's school lives in prekindergarten and continues through high school. Most children learn to read, pronounce words, practice phonics and blends, and continue with this process until they master the skills for reading. However, for one group of children, learning to read continues to be the most difficult part of schooling, and they fall behind their appropriate level of reading due to the constant struggle.

Burnette (1999) identified several themes that should enhance the effectiveness of improving reading:

1. Peer tutoring has repeatedly been found to be an effective method of teaching reading to students with disabilities.

2. Reciprocal tutoring may offer an added benefit of boosting students' self-esteem via the teaching role. Use of this technique requires an understanding of the process, organizational planning, training of tutors, and careful monitoring.

3. Use of small groups in reading instruction has been shown by many research studies to be more effective than use of whole-class instruction.

Burnette (1999) stated, "Teachers need to know the best ways of organizing their classrooms and grouping students for instructions in order to maximize student achievement" (p. 1). Once teachers identify how students learn and what strategies work best for them, especially the low achievers who are having difficulty in reading, they are able to help students to improve their reading skills.
Quatroche (1999) noted the importance of preventing reading problems from the beginning of the learning process by "engaging young children in activities that will enable them to meet success as readers at the early grade levels" (p. 2). She reported that the leaders of the National Research Council have stressed that the kind of instruction given is critical in children avoiding reading difficulties. To this end, effective instruction is necessary for students to gain competency in reading. Quaroche noted the following steps for teachers to take to prevent students from having reading difficulties at the outset of the learning process:

[1.] Focus on using reading to gain meaning from print.
[2.] Develop an understanding of the structure of spoken words.
[3.] Help children understand the nature of the orthographic system.
[4.] Provide practice of regular spelling-sound relationships.
[5.] Provide many opportunities for reading and writing. (p. 3)

To ensure further success in reading beyond the initial level, children need opportunities to develop an understanding of how sounds are represented in print, to develop fluency through practice reading texts, to develop concepts and vocabulary, and to develop strategies for monitoring their comprehension.

Johnson and Johnson (1987) recommended assigning students of high, medium, and low abilities to the same group and believed that doing so is very beneficial for students, who are not as task oriented as others, to be put with their more academically oriented peers. The two researchers suggested that teachers should give students the opportunity to choose other students with whom they are comfortable or with whom they would like to work and carefully place these students with others to maximize the heterogeneous makeup of each group. Johnson and Johnson indicated, "Cooperative learning procedures may be used successfully with any type of academic task, although they are most successful when conceptual learning is required" (p. 46). It is important
that teachers be able to provide a supportive environment for their students. They should identify their students' strengths and weaknesses through such groupings in order to help them become successful and productive learners.

**Mathematics Achievement**

Ascher (1983) believed that a link may exist between having difficulties in reading and having difficulties in math. She noted that Creswell found that reading and understanding English is a prerequisite for higher mathematic achievement. Reading achievement influences problem solving in math regardless of sex or ethnicity of the student. Ascher reported that the National Science Board Commission recommended some math strategies that help students to be successful in mathematics. These techniques include motivational strategies, sufficient time on task, high standards for participation and achievement, a coherent course of study with early hands-on experience, adequate resources, innovative use of available facilities, and extensive network. In concluding that these strategies are useful for student achievement, Ascher commented as follows:

> Although no single method has proven most effective, a variety of instructional methods does work. Moreover, the opportunity to learn math through sufficient coursework is fundamental. Schools needed to be more flexible and organized so that all students, including low achievers, can take a variety of individually tailored math program that can provide access to advanced math learning. (pp. 3-4)

Suydam (1984) found that problem solving appears to one of the most critical content areas in math. Students perform very well on other items dealing with computation, especially with whole numbers. Although scores on items dealing with computation and whole numbers have shown improvement, Suydam indicated that scores for word problems dealing with problem solving and conceptual thinking have not been as high and suggested, "Efforts to improve scores . . . might detract from work that needs to be done in developing students' abilities to understand 'real-life' problems and
formulate appropriate solution procedures. . . . The ability to analyze and translate a problem into mathematical language is essential" (p. 3).

Suydam (1984) concluded that the way that mathematics is taught is as critical as what is taught. She advised that assessment is not an end of itself and that the data such as, formal and informal test scores need to be used to enhance instruction of mathematics. Teaching math takes a great amount of effort with concrete materials and manipulatives and may take longer, but spending time in small groups, working with peers, and constantly practicing will contribute to student learning.

**Writing Achievement**

Writing is known as a critical content area. Writing represents who a person is. Writing has been one of the most important forms of communication. The need for writing is essential in daily life. Cooper (1986) stated that writing "is a way of engaging with the world" (p. 375).

As an elementary school teacher, the researcher of this applied dissertation study taught fourth grade for 3 years and found that students had a difficult time in communicating or expressing their ideas in writing. They wrote exactly the way that they spoke. Even though writing was incorporated in all areas of the school's curriculum--social studies, math, science, music, art, and language arts--students did not realize that they were learning to write in all disciplines and that they were benefiting from learning writing skills.

Commenting on the benefits of writing, Sorenson (1991) pointed out, "Students benefit in three ways: they have a resource for better understanding content; they practice a technique which aids retention; and they begin to write better" (p. 2) Sorenson stressed the importance of interdisciplinary writing: "Across-the-curriculum writing finds its merit in removing students from their passivity. Active learners are active thinkers, and one
cannot write without thinking" (p. 2). Traditionally, teachers have imparted knowledge; however, Sorenson found that, instead of filling the minds of students, teachers needed to be facilitators in aiding students with their understanding and application of knowledge. Students gain more understanding by making associations with information previously learned, and writing activity provides students with the opportunity to make those connections. Practicing in the classroom using the designated time period provides students with a real-life opportunity to assimilate information, to make connections, and to face whatever may confuse them in a testing environment. Although this may be challenging, the way to understand or articulate thoughts is perfected through repetition and practice in writing itself.

Sorenson (1991) contended that expressive writing usually allows students to write in their own vocabulary without fear of being corrected. Teachers generally have some difficulty in giving and evaluating such writings because of their subjectivity. Teachers should use available models of essay writing to help students tailor a topic, to delineate the ideas, and to focus on how to address an intended audience. Specific language helps students to prepare more focused responses. Sorenson concluded that the chief stumbling blocks for teachers are that they focus on their classroom time and seek ways to cover the curriculum requirements. Generally, when teachers incorporate writing into multiple disciplines, the need for reteaching and retesting is reduced.

Statistical evidence has not been readily available to demonstrate that particular learning techniques improve a state's competency test results. Most students experience less anxiety and believe that they are better writers after going through a school-wide writing-across-the-curriculum project. The greatest finding about writing is that students improve higher order reasoning skills the more they write and the more they reformulate
ideas from text and apply them.

Rankin (2001) found that, students in small writing groups may be given specific directions for discussion of their writings and for methods to critique each other's work; thus, both students and teachers may provide encouragement and suggestions for improvement. The group may meet at a scheduled time and discuss their writing experiences. She suggested that groups should be established at an early stage of a course in order for group members to offer one another consistent constructive criticism.

**At-Risk Students**

Donnelly (1987) noted that students who are unsuccessful academically are the ones who are potential dropouts. These students display characteristics of low self-esteem that has been link to low academic achievement. The majority of them are male students who come from low socioeconomic backgrounds and have parents who have a low educational background and low educational expectations for their children. These students do not associate or identify with the school or participate in activities. They usually exhibit impulsive behavior and have experienced disciplinary problems; moreover, family problems such as pregnancies and drug addiction often prevent them from participating in school activities. As a result, schools have become a negative environment that, in a sense, has aided them in falling behind their peers.

Tools are available to identify students at risk of becoming dropouts in the elementary stages (Donnelly, 1987). If caught early, they may be helped; a reevaluation of their family and living status may be addressed to bring about change. High absenteeism, low self-esteem, and academic achievement have been linked as root causes. Teachers should be well trained to identify, test, and refer these students to administrative staff for help in responding to their needs.
It is very important that teachers have training in cultural differences when dealing with minorities (Donnelly, 1987). The educators need to model equal-opportunity experiences in the classroom to provide positive experiences for these students and to give them an opportunity to succeed. Special programs and services such as tutoring, remediation, child care, substance abuse, bilingual instruction, employment training and close follow-up training have helped. Educators in schools often work with these students and help to instruct parents how to help these children.

Donnelly (1987) indicated that, in Connecticut, the educators in New Haven Elementary schools have worked with parents, teachers, and supportive staff to create a successful climate. By doing so, they have raised achievement and attendance and have lowered behavioral problems. Because stricter standards have been implemented, a higher number of at-risk students require help nationwide. Donnelly noted that, among other initiatives, the Connecticut Governor's Task Force on Readiness recommended a statewide mechanism for intervention for schools whose low achieving students are not progressing and for the development of incentives schools that are effectively dealing with these students. However, in a counterproductive move, the proponents of educational reform have managed to shift resources from the elementary and middle schools to high school reform programs, a move that may affect the progress made at the elementary level.

Students living in poverty have been affected severely academically; in fact, their living conditions have contributed to them becoming at-risk students. Several researchers have focused on family beliefs, values, and attitudes held by persons in low socioeconomic households. Renchler (2000) indicated that "low socioeconomic parents who had rigid, authoritarian beliefs about rearing and educating children had a strongly
negative influence on their children's achievement levels in reading" (p. 4). To aid these students, he believed that a restructuring must take place to overcome the disadvantages built into the current school finance structure. Renchler concluded that, if students who are in poverty attend schools that are poorly funded, these students are not likely to improve or achieve at the same level as their peers who attend better-funded schools.

Summary

Many studies have demonstrated that afterschool programs including ones focusing on math, reading, and writing have contributed to student success in school. The writers of all of the studies that the researcher explored have found that afterschool programs have had a positive impact on students' academic achievement.

At the target school, ESAC is administered in small group settings that are financially supported by the school. The small group settings have given teachers more individual time to spend with students. Regardless of the organization, afterschool programs are structured to achieve similar goals including providing a secure place for students to go after the school day. Parents see most afterschool programs as providing a better alternative in helping their children with homework and providing tutoring in academic disciplines where they have weaknesses. Afterschool programs are a better alternative for their children than watching television or being in the streets unsupervised after school.
Chapter 3: Methodology

The purpose of this study was to investigate the effects of the ESAC at the target school on at-risk students in the fourth grade based on the reading, writing, and math scores that they received on the FCAT and the Benchmark Assessment Test (BAT). The FCAT scores in these subject areas for 4 years were average and inconsistent. The researcher anticipated that the students who participated in the ESAC would improve their scores academically in the regular classroom. In addition, the researcher anticipated that the participating students' test scores would show significant growth in areas of their weaknesses.

This chapter is presented in three sections. In the first, the researcher described the participants, the procedure for data collection, and the types of data that were collected. In the second, she described the measurements and the validity and reliability of the instruments used, and, in the third part, she described the research design and data analysis to be applied.

Sampling Population

The sample selected for the study was at-risk students from the fourth grade based on their third-grade scores on the FCAT and BAT. These scores helped the researcher identify the students who were at the borderline of failure or who had failed the FCAT and performed poorly on the BAT. These students were given an alternative test to be promoted to the fourth grade, or, for good reasons, the third-grade teachers saw potential in the students and gave them an opportunity to be promoted based on the condition that they attend the ESAC to help them pass the FCAT and BAT in fourth grade.

Of the 190 fourth-grade students, approximately 50 students were chosen to attend the ESAC. These students were given consent forms and a letter explaining the
purpose of the intervention to take home for their parents' approval to attend the ESAC. These 50 students returned the consent forms to the school at the beginning of the 2006-2007 school year. They formed the experimental group. The 140 other students who did not participate in the ESAC did not need the consent forms, and they formed the control group. The students who attended ESAC included 90% African Americans and 10% Hispanics.

Teacher participation in ESAC was voluntary. ESAC was administered Mondays through Thursdays from 2:30 to 4:30 p.m. Teachers' planning time was scheduled on Mondays through Thursdays from 4:30 to 5:00 p.m. The ESAC coordinator kept a record of the students' attendance because it was mandatory. The ESAC was offered free of charge to students who were chosen to attend. Teachers were paid hourly based on their salaries and years of experience.

Procedures for Data Collection and Analyses

The researcher collected data from the elementary school archives. These data included FCAT scores in reading, writing, and math for students in Grades 3 through 5 from 2003-2004 through 2006-2007. The researcher gathered Grade 4 ESAC students' Grade 3 scores for 2005-2006 and Grade 4 FCAT and BAT scores for the 2006-2007 school years. These scores were compared to those of the control group who did not participate in the ESAC.

The research process commenced at the beginning of the 2006-2007 school year. The researcher reviewed the students' data on FCAT scores for reading, writing, and math at the end of the school year and made a comparison of the scores of the experimental group of students who attended the afterschool programs and those of the control group who did not. The researcher collected BAT results for fourth-grade students. Both the
control and experimental groups took the BAT every 9 weeks or four times in the 2006-2007 school year. The four BAT tests were administered in September 2006, December 2006, March 2007, and May 2007. During the year, each of the four sets of test results of students in the experimental group were compared to the results of the students in the control group who did not participate in ESAC.

The researcher also collected FCAT scores of ESAC students at the end of the 2006-2007 school years. Florida Writes, the writing portion of the FCAT, was written in March 2007 and the reading and math portions of the FCAT were written in April 2007. Both the control and experimental groups of students took the FCAT.

The researcher collected, analyzed, and compared quantitative data for Grade 4 students who participated in the ESAC program and for those who did not. The teachers collected the data on the selected students. The teachers were given a form titled the Teacher Report Instrument. The teachers used this instrument to record students' scores without using their names. The students were given a number so that they would remain anonymous and so that the researcher could make comparisons of their test results.

The researcher also collected qualitative data from the parents and teachers of Grade 4 students to analyze parents and teachers perceptions about the ESAC program that the students attended in the 2006-2007 school year. The Grade 4 students were given a letter and survey (see Appendix A) to take home to their parents. The letter explained the purpose of the survey and that the survey was completely anonymous, voluntary, and confidential. The survey provided feedback from the parents of the fourth graders. From this data, the researcher was able to identify the areas of weakness and strengths of the ESAC program and insights concerning future implementation of the ESAC. The researcher disseminated a similar survey to teachers who taught in the ESAC (see
Appendix B). The purpose of the teacher survey was similar to that of the parent survey.

The researcher developed two surveys and titled them the Educator Academic Growth Survey that was used for the teachers, and the Parent Academic Growth Survey that was used for the parents. From the responses to the surveys, the researcher collected data and kept them confidential. These data were important to learn the perceptions of the parents and teachers about the program funding, time spent, participation, and effort invested in the ESAC. Their insights into academic improvements in reading, writing, and math scores during each report card period were useful in determining academic improvements.

**Measurements**

The data of students in fourth grade who participated in ESAC and of the control group were collected at the end of the 2006-2007 school year. The test scores for the FCAT and BAT were analyzed to evaluate academic growth and improvement in areas of reading, writing, and math. The scores for the Grade 4 students in ESAC were compared to their third-grade scores to determine academic improvement. According to the 2005-2006 school year requirements, students had to maintain a 40% average in the math and reading portions of the FCAT for promotion and a 4.0 on the writing portion of the FCAT based on a scale of 1.0 to 6.0.

The BAT was used to measure academic growth every 9 weeks or every quarter to monitor how well students were improving in areas of weakness. These assessments also helped teachers to focus on areas where the students needed more practice. The BAT is a product of pre-assessment and post assessment at the beginning and end of the school year. It was used at the end of every 9 weeks to measure growth of academic performance. The BAT was administered throughout the whole district in alignment with
the FCAT and was part of the school district's plan to obtain an ongoing assessment of students from Grades 1 through 5. The advantages of the BAT were that teachers were able to receive immediate scores and were able to address areas of academic concern for each student in a timely manner.

**Validity and Reliability**

The FCAT reading, math, and writing were given in March of every year and the results obtained were received by the end of the school year so that parents and teachers were aware of the status of students' promotion to the next grade. Student promotion was contingent upon the FCAT results. The Northwest Evaluation Association performed an analysis of the reliability and validity statistics for the FCAT (Dahlin, 2007). The association used a mix of test-retest reliability and parallel forms of reliability that spanned a longer time than used by most assessments to ascertain that the instrument was reliable.

*Validity.* Stainback and Stainback (1988) indicated that findings could be considered valid "if there was a fit between what was intended to be studied and what actually was studied" (p. 97). Merriam (1988) maintained the need to establish validity to eliminate concerns that may arise about the trustworthiness of the study and wrote, "Because of the nature of his type of research, these concerns may loom larger than in experimental designs wherein validity and reliability are accounted for at the start" (p. 163).

To establish and to maintain validity and reliability of the FCAT and BAT, the researcher used the research questions as a continual reminder of the goal and purpose of the study to ensure that what was intended to be studied was the actual focus of the study. As data were reviewed, all follow-up questions were developed with the research
questions in mind. The process of reviewing and gathering data from the BAT and FCAT scores has to be repeated throughout the data collection and analysis process, according to Merriam, and thereby adds credence to the final analysis.

During qualitative research, Patton (1990) believed, "[The] researcher is the instrument" (p. 143). He elaborated, "Validity in qualitative methods, therefore, hinges to a great extent on the skill, competence, and rigor of the person doing fieldwork" (p. 143).

**Reliability.** Stainback and Stainback (1988) defined reliability as "the consistency and stability of data or findings" (p. 98). They further stated, "Reliability is typically considered to be synonymous with the consistency of data produced by observation" (p. 98).

To establish reliability, reduce biases, and strengthen the findings of this study, the researcher used the test manual of Glascoe (1999) who asserted that the stability of the scores of students when numerous people test them at different periods and with various forms is known as reliability. Despite the change in conditions of testing, the students are able to maintain reliable and consistent scores.

Reliability also involves considering what may be the reasons for or the possible causes of the differences in scores and whether a cause is due to human error or whether students just normally show some difference for no specific reason. Glascoe examined the dimensions of reliability and found that (a) internal consistency involves the assumption that a distinct proficiency was measured by each assessment and test-retest and (b) reliability involves an evaluator examining whether or not a student has received a similar score when he or she is tested and retested a few days or a few weeks later using the FCAT and BAT.

**Parent and Teacher Surveys**

The researcher developed two surveys to receive feedback from parents and
teachers about their perceptions of the ESAC program. Completing the surveys was voluntary. In completing a survey, a person made no commitment for participation. No names were on the surveys, and the information collected was kept in confidence. Only the researcher had access to the information. The Parent Academic Growth Survey was sent home with all the students who attended ESAC with a stamped, self-addressed envelope to be returned to the researcher by mail. The Educator Academic Growth Survey was placed in the teachers' mailboxes with a stamped, self-addressed envelope to be returned to the researcher by mail.

The data from the responses were analyzed and used to make further recommendations for ESAC. According to Patton (1990), "[An] investigator's commitment was to understand the world as it is, to be true to its complexities and multiple perspectives as they emerge, and to be balanced in reporting both confirming and disconfirming evidence" (p. 55).

Teacher survey. The researcher developed a survey titled Educator Academic Growth Survey (see Appendix B) for the teachers who volunteered to teach ESAC. This survey consisted of 10 Likert-type questions. The survey was administered at the end of the ESAC and was analyzed and further used in the pursuit of students' achievement through the ESAC. Merriam (1988) described the purposes of case study research: "One selects a study approach because one wishes to understand the particular in depth, not because one wants to know what is generally true of many" (p. 173). This survey was developed with the intention of receiving honest feedback from teachers concerning whether ESAC was effective in cost and time invested in at-risk students to enhance their academic performance.

Parent survey. The researcher developed a survey titled Parent Academic Growth
Survey (see Appendix A) for parents whose children were involved in ESAC. This survey consisted of 10 Likert-type questions. This survey was administered at the end of ESAC to the parents. The responses were analyzed, and the data were used in the pursuit of their child's or children's academic achievement as a result of participating in the ESAC. Results from this survey provided insights into parents' perceptions of the impact of ESAC on their child's or children's ability to excel. The parents' perceptions were also useful in providing insights to other parents, recommendations about the ESAC, and insights into the continuation of ESAC.

Stainback and Stainback (1988) reported, "No two people, groups of people, or settings are likely to be the same" (p. 102). The researcher attempted to conduct the study and report the findings in a neutral manner. According to Patton (1990), researchers should be "balanced in reporting both confirming and disconfirming evidence" (p. 55) so that the reader may judge the results. After undergoing several drafts, the final, approved draft of the parent and teacher surveys were used to gather information from parents and teachers about their perspectives on ESAC.

Research Design and Analysis

The mixed method research design incorporated two methods. The first three research questions used a comparative method and the last two questions used the descriptive-survey research design. The statistical analyses that were conducted (a) for the first three questions were means, standard deviations, and $t$ tests and (b) for the last two questions were descriptive statistics. SPSS for Windows (version 15) was used to compute frequencies, percentages, and means.

The research was designed to investigate whether afterschool programs would contribute to students' academic achievement in the target elementary school. The
researcher found evidence in the review of related literature that the implementation of academic programs after school allows for an increased opportunity for student academic success. The researcher anticipated that the ESAC program would foster improved levels of performance and would improve overall academic achievement in reading, writing, and math. The anticipated findings of improved performance provided support for the continued implementation of this intervention that addressed the problems of students who struggled academically in the target school. The perceptions of parents and teachers about the nature of the program provided helpful insights in ongoing improvement of the program.

Summary

In this chapter, the researcher presented the sampling population and the data collection procedures of this study. The instruments and the measures were described with discussion regarding the validity and reliability of the measures. The researcher also outlined the research design, the methods for data collection, and analysis of students' test scores. The perceptions of teachers who taught in the ESAC and of parents of students who participated in the ESAC were gathered from their responses to the surveys.
Chapter 4: Results

Overview of the Research Study

The purpose of this study was to investigate the effects of ESAC on at-risk students in the fourth grade based on the reading, writing, and math scores that they received on the FCAT and the BAT. In addition, the responses of the parents of students and of the teachers involved in the ESAC were assessed. The following research questions were examined during the study:

1. Will fourth-grade students who participated in the ESAC score better in the reading portion of the standardized test than the control group as measured by the FCAT scores?

2. Will fourth-grade students who participated in the ESAC score better in the mathematics portion of the standardized test than the control group as measured by the FCAT scores?

3. Will fourth-grade students who participated in the ESAC score better in the writing portion of the standardized test than the control group as measured by the FCAT scores?

4. How will parents of fourth-grade students who attended the ESAC assess the academic growth, weaknesses and strength of the ESAC?

5. How will teachers of fourth-grade students assess the ESAC, and what recommendations will be made for enhancement of the ESAC?

The historical data from the Florida Department of Education of 190 students in Grade 4 were analyzed. The number of students who participated in ESAC changed due to the consistency of regular attendance mandate. Four of the 50 students from the experimental group were terminated because of the inconsistency of attendance, leaving
46 students who attended the program from the beginning and 140 who formed the control group.

This chapter presents, for each research hypothesis, an objective discussion of the statistical findings. All tests were declared significant at $p < 0.05$. SPSS for Windows (version 15) was used in all analyses.

**Descriptive Statistical Findings**

The descriptive statistics were based on the FCAT and BAT scores of participating students during Grades 3 and 4. The FCAT measures ranged from 1 to 5, and the BAT scores were percentages. The data in Table 7 indicated the findings for the FCAT results from Grades 3 to 4 of the experimental group.

Table 7

*Paired Grade 3 to 4 Florida Comprehensive Achievement Test Scores*

<table>
<thead>
<tr>
<th>Grade</th>
<th>$M$</th>
<th>$SD$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Math</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2.22</td>
<td>.89</td>
<td>3.65</td>
<td>.80</td>
</tr>
<tr>
<td>4</td>
<td>2.26</td>
<td>.77</td>
<td>3.30</td>
<td>.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.54</td>
<td>.50</td>
<td>3.51</td>
<td>.61</td>
</tr>
<tr>
<td>4</td>
<td>2.09</td>
<td>.78</td>
<td>3.30</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1.29</td>
<td>.82</td>
<td>2.28</td>
<td>.87</td>
</tr>
<tr>
<td>4</td>
<td>2.37</td>
<td>.65</td>
<td>2.87</td>
<td>.67</td>
</tr>
</tbody>
</table>

*Note.* Validated $N = 46$ for experimental group and 144 for control group.

Although an increase was found in all the mean FCAT scores from Grades 3 and 4
of the experimental group, the group that participated in the ESAC program means were slightly higher for writing (1.08) than for reading (0.55) or mathematics (0.04). Results for the control group showed a decrease in the mean score for mathematics (-0.35) and reading scores (-0.21), but mean writing scores increased (0.59).

A comparison of the BAT scores for Grade 4 students showed an increase from the pre-BAT mean scores to the post-BAT mean scores for mathematics (11.7) and reading (15.63). The data in Table 8 indicated these findings.

Table 8

*Pre- and Post-Benchmark Achievement Test Scores for Experimental Group*

<table>
<thead>
<tr>
<th>Test</th>
<th>Min.</th>
<th>Max.</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>2</td>
<td>46</td>
<td>37.43</td>
<td>16.98</td>
</tr>
<tr>
<td>Post</td>
<td>7</td>
<td>87</td>
<td>49.13</td>
<td>16.63</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>7</td>
<td>80</td>
<td>23.89</td>
<td>12.20</td>
</tr>
<tr>
<td>Post</td>
<td>13</td>
<td>89</td>
<td>39.52</td>
<td>20.61</td>
</tr>
</tbody>
</table>

*Note.* Validated $N=46$; min. = minimum; max. = maximum.

In Table 9, the two groups’ mean scores in math and reading showed a progressive increase in mean math scores from 59.7 to 71.4 for the experimental group, and 57.3 to 71.6 for the control group. Reading scores, however, did not show a growth pattern.
### Table 9

*Quarterly Report Card Scores of Experimental and Control Groups*

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>M</em></td>
<td><em>SD</em></td>
</tr>
<tr>
<td></td>
<td><em>Math</em></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>59.69</td>
<td>15.00</td>
</tr>
<tr>
<td>2</td>
<td>62.00</td>
<td>15.07</td>
</tr>
<tr>
<td>3</td>
<td>66.58</td>
<td>14.54</td>
</tr>
<tr>
<td>4</td>
<td>71.44</td>
<td>12.97</td>
</tr>
<tr>
<td></td>
<td><em>Reading</em></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>65.96</td>
<td>15.22</td>
</tr>
<tr>
<td>2</td>
<td>68.39</td>
<td>10.83</td>
</tr>
<tr>
<td>3</td>
<td>67.43</td>
<td>11.60</td>
</tr>
<tr>
<td>4</td>
<td>69.11</td>
<td>9.82</td>
</tr>
</tbody>
</table>

*Note.* Validated *N* = 45 in experimental group in math and 46 in experimental group in reading; validated *N* = 8 in control group in math and reading.

### Inferential Statistical Findings

To test Research Questions 1, 2, and 3, the researcher performed nonparametric Wilcoxon rank sum and tests on FCAT changes in reading, mathematics, and writing scores from Grades 3 to 4 to determine whether differences between experimental and control groups existed. In addition, Mann-Whitney *U* and Wilcoxon-signed rank tests on FCAT changes in reading, mathematics and writing were performed to determine whether changes from Grades 3 to 4 for each group separately occurred.

For the experimental group, BAT scores for reading and mathematics from the beginning to midyear of Grade 4 were computed using paired-samples *t* tests. For the experimental group, two repeated measures analyses of variance tests were conducted for

*Note.* Validated *N* = 45 in experimental group in math and 46 in experimental group in reading; validated *N* = 8 in control group in math and reading.
grades in reading for the grades in mathematics on the four report cards to determine whether grades improved in Grade 4. All tests were declared significant when \( p \) value was \( p < 0.05 \). SPSS for Windows (version 15) was used in all analyses. Repeated measure analyses of variance tests were also conducted on the report card scores in reading and mathematics for each of the four 9-week reporting periods within the Grade 4 year.

**Findings for Research Questions 1-3**

For the experimental group, a significant increase was found between the reading \( (t = -3.94; p < 0.001) \) and writing scores from Grade 3 to 4, but not with the mathematics scores \( (t = -0.33; p = 0.743) \). For the control group, the findings showed a significant decrease between mathematics \( (t = 5.48; p < 0.001) \) and reading \( (t = 3.54; p < 0.001) \) scores from Grade 3 to 4, and a significant increase in writing scores \( (t = -9.94; p < 0.001) \) in Grade 3 to 4 reading and mathematics (see Table 10).

Table 10

*Results of Paired-Sample t Tests of Florida Comprehensive Achievement Test Scores From Grade 3 to Grade 4*

<table>
<thead>
<tr>
<th>Subject</th>
<th>( M )</th>
<th>( SD )</th>
<th>( df )</th>
<th>( t ) test</th>
<th>( p ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>0.040</td>
<td>.890</td>
<td>45</td>
<td>-.330</td>
<td>.743</td>
</tr>
<tr>
<td>Reading</td>
<td>-.540</td>
<td>.940</td>
<td>45</td>
<td>-3.940</td>
<td>.000</td>
</tr>
<tr>
<td>Writing</td>
<td>-1.08</td>
<td>.750</td>
<td>45</td>
<td>-9.700</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>.350</td>
<td>.760</td>
<td>143</td>
<td>5.480</td>
<td>.000</td>
</tr>
<tr>
<td>Reading</td>
<td>.220</td>
<td>.730</td>
<td>143</td>
<td>3.540</td>
<td>.001</td>
</tr>
<tr>
<td>Writing</td>
<td>-.590</td>
<td>.720</td>
<td>143</td>
<td>-9.940</td>
<td>.000</td>
</tr>
</tbody>
</table>

*Note. p value significance = p < 0.05.*

Findings for the Wilcoxon test for FCAT within each group separately showed
that the students in the experimental group had a significant increase in FCAT reading scores from Grade 3 to 4 ($z = 3.46; p = 0.001$) with 57% of the students ($n = 26$) improving their FCAT reading scores at least one category (see Appendix C). They also had a significant increase in FCAT writing scores from Grade 3 to 4 ($z = 5.49; p < 0.001$) with 85% of the students in the experimental group ($n = 39$) improving their writing scores at least a half point from Grade 3 to 4.

The control group experienced a significant difference from Grade 3 to 4 on the FCAT reading scores ($z = 3.45; p = 0.001$) with only 11% of the students ($n = 16$) increasing their scores at least one category. This was a ceiling effect since the entire control group of students began with a 3 or more on a 5-point scale. Findings showed a significant difference from Grade 3 to Grade 4 on the FCAT mathematics scores ($z = 5.08; p < 0.001$) with 8% of the students ($n = 11$) increasing their scores at least one category. Again, this was a ceiling effect because the entire control group of students began with a 3 or more on a 5-point scale. In addition, a significant difference was found from Grade 3 to 4 on the FCAT writing scores ($z = 7.89; p < 0.001$) with 62% of the students ($n = 89$) increasing their scores at least a half point from Grade 3 to Grade 4.

Changes in FCAT reading scores from Grades 3 to 4 significantly differed between experimental and control groups ($z = 5.10; p < 0.001$). The findings showed that 57% of the experimental group students improved their FCAT reading scores at least one category compared to 11% of the control group (see Table 11). Changes in FCAT mathematics scores from Grade 3 to 4 significantly differed between experimental and control groups ($z = 2.62; p = 0.009$), and 24% of the experimental group students improved their FCAT reading scores at least one category compared to 8% of the control group.
Table 11

Results of Mann-Whitney U and Wilcoxon W Tests on Florida Comprehensive Achievement Test Scores of Experimental and Control Groups From Grade 3 to Grade 4

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mann-Whitney</th>
<th>Wilcoxon</th>
<th>z</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>1811.000</td>
<td>12251.000</td>
<td>-5.100</td>
<td>.000</td>
</tr>
<tr>
<td>Math</td>
<td>2553.50</td>
<td>12993.500</td>
<td>-2.620</td>
<td>.009</td>
</tr>
<tr>
<td>Writing</td>
<td>2205.000</td>
<td>12645.000</td>
<td>-3.520</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. FCAT = Florida Comprehensive Achievement Test; p value significance = p < 0.05.

Changes in FCAT writing scores from Grade 3 to 4 significantly differed between experimental and control groups (z = 3.52; p < 0.001). The findings showed that 85% of the experimental students improved their writing scores at least a half point compared to 62% of the control group increasing their scores at least a half point (see Table 12).

Table 12

Pre- and Post-Benchmark Assessment Test Scores for Experimental Group

<table>
<thead>
<tr>
<th>Subject</th>
<th>M</th>
<th>SD</th>
<th>sf</th>
<th>t test</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math</td>
<td>-11.70</td>
<td>18.28</td>
<td>45</td>
<td>-4.34</td>
<td>.000</td>
</tr>
<tr>
<td>Reading</td>
<td>-15.63</td>
<td>17.70</td>
<td>45</td>
<td>-5.99</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. BAT = Benchmark Assessment Test; p value significance = p < 0.05.

For the Grade 4 students in the experimental group, as shown in Table 12, a significant increase from the pre-BAT (M = 23.9; SD = 12.2) to the post-BAT Grade 4 (M = 39.5; SD = 20.6) in the reading scores (t(45) = 5.99; p < 0.001). A significant increase was also found from the pre-BAT (M = 37.4; SD = 17.0) to the post-BAT (M =
Prior to conducting the repeated measures analysis of variance test on reading and mathematics grades on report cards, the researcher performed the Mauchly's test of sphericity to test the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables was proportional to an identity matrix. The null hypothesis was rejected (Mauchly's $W = 0.48; p < 0.001$) and as such the degrees of freedom were adjusted for the averaged tests of significance.

Results of the tests of within-subjects effects showed that, for the experimental group, a significant difference was not found in reading grades on report cards over the four 9-week periods ($F_{(3,135)} = 0.91; p = 0.438$). However, a significant difference was found in math grades on the report cards over the four 9-week periods ($F_{(3,132)} = 37.59; p < 0.001$).

In addition, post hoc pair-wise comparison tests using Fisher's least significance difference test in mathematics grades on report cards indicated that Period 1 ($M = 59.7$) and Period 2 ($M = 62.0$) did not differ significantly. However, measures for both Period 1 and Period 2 were significantly less than for Period 3 ($M = 66.6$) that was significantly less than Period 4 ($M = 71.4$) at the .001 level of significance.

**Findings for Research Questions 4-5**

To answer Research Question 4, the researcher determined frequencies and percentages for all items of the parent and teacher surveys. To investigate the mean responses, the researcher assigned the following values to the 5-point Likert-type scale: 

- strongly disagree = 1;
- disagree = 2;
- unsure = 3;
- agree = 4;
- strongly agree = 5.

Parent and teacher responses to the surveys were analyzed (see Figures 1 and 2 and Appendixes D and E). Findings showed that most parents agreed or strongly agreed on average ($M > 3$) with the statements given in the interview questionnaire. Although a small
percentage tended to disagree or were unsure, as shown in Figure 1, the mean response to Question 5 showed that 22.5% would not continue to let their child participate in the ESAC if no improvement in academic performance were found, whereas 17.5% were unsure. Also, 27.5% of parents were unsure whether they had seen academic improvement in their child's performance at school in problem-solving strategy for math, with 15% reporting no improvement. Similar results were found for reading competency and writing.

![Figure 1](image1.png)

*Figure 1.* Mean responses of parents to the interview questions.

![Figure 2](image2.png)

*Figure 2.* Mean responses of teachers to the interview questions.
Summary

In this chapter, the researcher discussed the data analysis and findings of students' test scores and the results of the parent and teacher surveys. The analysis indicated improvement in the students who participated in the ESAC. The analysis also indicated that teachers and parents agreed that the ESAC was helpful to the students who participated. The researcher found the ESAC to be effective due to the increase of students' test scores in the standardized test.
Chapter 5: Discussion

The purpose of this study was to investigate the effects of an ESAC on at-risk students in the fourth grade based on the reading, writing, and math scores that they received on the FCAT and the BAT. The FCAT scores in these subject areas for 4 years had been average and inconsistent.

The researcher anticipated that the students who participated in ESAC improved their scores academically in the regular classroom. In addition, the researcher anticipated that the test scores of participating students showed significant growth in areas of their weaknesses. In particular, the researcher anticipated that the outcomes of the intervention showed that the students in the experimental group who participated in the ESAC scored better on the reading, writing and math portions of standardized tests than the control group as measured by FCAT scores.

Overview of the Applied Dissertation

The purpose of this research study was to investigate whether afterschool programs, also known as extended-day programs, conducted in school buildings might be implemented in other community locations to enhance academic performance for students with reading difficulties and low test scores. The school district, the state government, or federal government, singly or in combination, provided funds for the afterschool programs in the school district. In this case, the ESAC was supported by the school and chiefly focused on students who were at risk of being retained or who were at the borderline for failure. These students had difficulty in math, reading, and writing. The ESAC students met in small groups of 8 to 10 individuals.

The number of studies and related theories concerning the positive outcomes of afterschool programs were so abundant that, in some instances, they were repetitive in both
older and current research. Morris et al. (1990) found that, 8 months after the implementation of an afterschool tutoring program, students increased or improved their reading level by one level or 10 points. That is the equivalent of 1 year. Hock et al. (2001) found that tutoring programs held before school and after school may transform students' academic failure to academic success. These researchers asserted that creating an efficient afterschool curriculum was an effective way to enhance student performance. Witt and Baker (1997) investigated the academic results of students in Grades 3 through 6 who attended an academic program and those who did not and found that, by the end of the school year, considerable differences were found in grades of the two groups for reading, science, math, and language arts.

Summary of the Findings

Results from the $t$ tests showed that fourth-grade students who were identified as being at risk based on Grade 3 performance and who participated in the ESAC scored significantly better in the reading and writing portion of the standardized tests than they had scored in Grade 3. Results for the control group showed only a significant improvement in writing as measured by the FCAT scores.

For the control group, the nonparametric tests showed a significant improvement from Grade 3 to 4 on the mean scores in reading, mathematics, and writing on the FCAT. For the experimental group, a significant improvement was found in reading and writing scores on the FCAT from Grade 3 to 4, but the improvement in mathematics was not significant.

Findings for Research Question 1 showed that more of the students in the experimental group improved their FCAT reading scores at least one category than the students in the control group. Findings for Research Question 2 showed that more of the
students in the experimental group improved their mathematics scores on the FCAT by at least one category than students in the control group. Moreover, findings for Research Question 3 showed that more of the students in the experimental group improved their writing scores than those in the control group.

Additional tests on the BAT and report card grades showed that the experimental group showed significant improvement in performance in both reading and mathematics BAT scores. However, a significant difference was not found in reading grades on report cards over the four 9-week periods, although a significant difference was found in the mathematics grades on report cards over the four 9-week periods. Findings showed that mathematics grades on report cards for Periods 1 and 2 did not differ significantly but that measures for both Periods 1 and 2 were significantly less than those for Period 3, and Period 3 mathematics grades was significantly less than those of Period 4. Findings for Research Questions 4 and 5 showed that on the whole, both parents and teachers agreed that participation in the ESAC was not only beneficial to the children identified as being at risk, but also would be beneficial to all students.

**Implications of the Findings**

Findings from the study showed that more students in the experimental group improved their FCAT reading and math scores by at least one category than students in the control group, and that more of the experimental students improved their writing scores by half a category than did students in the control group. In addition, the BAT and report card grades showed that the experimental group showed significant improvement in performance in BAT scores for both reading and mathematics. However, a significant difference was not found in reading grades on report cards over the four 9-week periods, although a significant improvement was found in mathematics grades on report cards over
the four 9-week periods.

Findings for the parent and teacher survey showed that on the whole, both parents and teachers agreed that participation in the ESAC was not only beneficial to the children identified as being at risk, but also would be beneficial to all students. Teachers of students who participated in the ESAC had the opportunity to analyze and evaluate the program and to make recommendations for enhancements to the program. Moreover, parents of students in ESAC were able to analyze the strengths and weaknesses and provide input into improving the program.

Posner and Vandell (1994) affirmed that, not only are afterschool programs rapidly increasing, but they are also getting strong support from parents and families across the country as they become more aware of the significant benefits that these programs may provide. Witt (2001) noted that, as students in afterschool academic programs are exposed to a number of activities unavailable during the regular school day, they usually have more opportunities for growth and learning. The students have a greater amount of time for individual attention from teachers because of the smaller group settings. Teachers more often than not consider afterschool programs a necessity and believe that children require an environment where they can be engaged in daily structured activities after school.

Limitations

The main limitation to the study was in the generalizability of the findings. The convenience sample of historical data was taken from only one school that included students who were mainly low achievers. Moreover, the ESAC was not offered to all students whose parents would have liked them to participate in an afterschool program. The study was also limited in that only students were chosen to attend who did not have to pay for the service. Students who were doing well academically and wanted to
participate in ESAC for a place of safety after school were not allowed to do so.

Teachers who taught fourth grade in the ESAC might not have been fourth-grade teachers. That, of itself, might have been a problem because these teachers did not have the experience to address specific problems limited to the fourth-grade students. The ESAC was also not a district-wide program; the principal funded the program from Parent Teacher Association funds for at-risk students, restricting other students who did not meet the criteria. Helpern (2000) contended that one criticism of the academic trend was that the pressures from funding sources to provide evidence that afterschool programs produce positive outcomes in the form of higher standardized test scores leads to a narrowing of scope causing the ESACs to turn into test preparation centers. Placing priority on low achievers and not on all students who might benefit from an ESAC might be considered a disadvantage to the program.

The irregular attendance of the students in the experimental group was another limitation to the study. Of the 50 students who were registered for the study, 1 to 4 students were absent each day. Additionally, each week, between one to four students from the experimental group were absent from school due to family obligation such as babysitting, household chores, complications at a parent's job, and parents working late hours and being unable to wake up in the morning to get the students ready for school or other commitments. Attendance for students in the experimental group was mandatory, and students who had three absences were not permitted to continue participating in the program. Due to regular absences, 4 students were asked to leave the program, leaving 46 students in the program.

Recommendations

Many studies demonstrated that afterschool programs including ones focusing on
math, reading, and writing contributed to students' success in school. The writers of all of the studies that the researcher explored found that afterschool programs had a positive impact on students' academic achievement in school. Given the small group settings, teachers had more time to spend with students on an individual basis.

Regardless of the organization, afterschool programs were structured to achieve similar goals including providing a secure place for students to go after the school day. Parents perceived that (a) most afterschool programs provided a better alternative in helping their children with homework and providing tutoring in academic disciplines where they have weaknesses and (b) afterschool programs were a better alternative for their children than watching television or being in the streets unsupervised after school.

Recommendations from the parent and teacher surveys indicated that every child, whether at risk or not, should have the opportunity to participate in the ESAC. This study, although limited by generalizability, showed that participation in the ESAC boosted Grade 4 academic achievements in the regular classroom. Findings from the parents and teachers involved in this study supported this view. However, funding and staffing for the ESAC are necessary to ensure continuity within the school to make this service available to all learners in future.

Another recommendation would be that, if it were possible, the principal should implement academic camp for students in the primary grades who are identified with reading problems. The benefits to be derived from the use of afterschool hours seem great. The most effective ways to capitalize on this opportunity is not well understood and existing afterschool efforts varies enormously in purpose and in operation. To maximize the benefits of afterschool programs for students from kindergarten to Grade 4, particularly for at-risk students, may mean that including students when they are in the
primary grades may help them so significantly that they may not need ESAC in the intermediate or advanced grades. Engman (1992), Henderson (1990), Mercure (1993), and Milch (1986) argued that academically based afterschool programs have been loosely linked to improving at-risk children's academic and social skills and work habits as soon as students are identified with difficulties in reading, math, or writing especially at a young age.

**Summary**

The purpose of this study was to evaluate an ESAC and to determine its effectiveness as a mechanism for improving students' performance in reading, math, and writing in the fourth grade. The data collected, though limited to the sample, showed that the impact of the ESAC on academic performance was positive: Significant improvements were made in reading, writing, and math performance by those who attended the ESAC, as opposed to those who did not.

The researcher found the ESAC in the target school to be effective, as measured by the increase of students' academic achievement in their FCAT and BAT scores. In the review of literature, the researcher found and applied successful afterschool characteristics for the ESAC at the target school. As a result, parents and teachers also showed their support for the program.
References


Appendix A

Parent Academic Growth Survey
Parent Academic Growth Survey

Circle one of the responses in parentheses ( ).

(SD)-Strongly Disagree; (D)-Disagree; (U)-Unsure; (A)-Agree; (SA)- Strongly Agree

1. I believe that my child/ren benefited from ESAC.
   (SD) (D) (U) (A) (SA)

2. I have seen academic improvement in my child's performance at school in reading competency.
   (SD) (D) (U) (A) (SA)

3. I have seen academic improvement in my child's performance at school in math/problem solving strategy.
   (SD) (D) (U) (A) (SA)

4. I have seen academic improvement in my child's performance at school in writing.
   (SD) (D) (U) (A) (SA)

5. I would continue to let my child participate in ESAC if there is no improvement in academic performance.
   (SD) (D) (U) (A) (SA)

6. I think that ESAC hours are appropriate.
   (SD) (D) (U) (A) (SA)

7. I think ESAC is an effective program.
   (SD) (D) (U) (A) (SA)

8. I think every child should participate in EASC.
   (SD) (D) (U) (A) (SA)
9. I think that ESAC can be improved with parents' involvement.

(SD) (D) (U) (A) (SA)

10. I would recommend this ESAC to other parents for their children.

(SD) (D) (U) (A) (SA)
Appendix B

Educator Academic Growth Survey
Educator Academic Growth Survey

Circle one of the responses in parentheses ( ).

(SD)-Strongly Disagree; (D)-Disagree; (U)-Unsure; (A)-Agree; (SA)- Strongly Agree

1. The ESAC helps to boost my students' academic achievement in the regular classroom.

(SD) (D) (U) (A) (SA)

2. The students attending ESAC show gains in test scores.

(SD) (D) (U) (A) (SA)

3. The time spent in ESAC is meaningful to the students.

(SD) (D) (U) (A) (SA)

4. Students show improvement in academic performance after ESAC.

(SD) (D) (U) (A) (SA)

5. ESAC helps to raise the students' reading grade level by one letter grade or more.

(SD) (D) (U) (A) (SA)

6. ESAC helps to raise the students' math grade level by one letter grade or more.

(SD) (D) (U) (A) (SA)

7. ESAC helps to improve students' writing performance by one letter grade or more.

(SD) (D) (U) (A) (SA)

8. I think more students should attend ESAC next year from different grades.

(SD) (D) (U) (A) (SA)

9. ESAC is beneficial for students who are performing at or above grade level.

(SD) (D) (U) (A) (SA)
10. I will recommend ESAC to parents.

(SD) (D) (U) (A) (SA)
Appendix C

Results of Paired-Sample Wilcoxon-Signed Rank Tests on Florida Comprehensive Achievement Test Scores
Results of Paired-Sample Wilcoxon-Signed Rank Tests on FCAT Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Pairs</th>
<th>Ranks</th>
<th>N</th>
<th>z</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experimental</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>FCAT Reading</strong></td>
<td>7</td>
<td>-3.461(a)</td>
<td>0.001*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative Ranks</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Ranks</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ties</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FCAT Math</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>Negative Ranks</strong></td>
<td>10</td>
<td>-0.349(a)</td>
<td>0.727</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Ranks</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ties</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FCAT Writing</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>Negative Ranks</strong></td>
<td>0</td>
<td>-5.490(a)</td>
<td>0.000*</td>
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<td></td>
<td></td>
<td>Positive Ranks</td>
<td>39</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>Ties</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>FCAT Reading</strong></td>
<td>3</td>
<td>-3.453(b)</td>
<td>0.001*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative Ranks</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Ranks</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ties</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FCAT Math</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>Negative Ranks</strong></td>
<td>50</td>
<td>-5.083(b)</td>
<td>0.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Ranks</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ties</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>144</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FCAT Writing</strong></td>
<td><strong>Grade 4 – Grade 3</strong></td>
<td><strong>Negative Ranks</strong></td>
<td>15</td>
<td>-7.886(a)</td>
<td>0.000*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive Ranks</td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ties</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>144</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. N = validated total; sig. = asymp. sig. 2 tailed; p significant = p<0.05; (a) based on negative ranks; (b) based on positive ranks.*
Appendix D

Frequencies and Percentages of Responses From Parents
<table>
<thead>
<tr>
<th>Parent interviews</th>
<th>N</th>
<th>SD</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I believe that my child/ren benefited from ESAC</td>
<td>40</td>
<td>1(2.5)</td>
<td>1(2.5)</td>
<td>6(15)</td>
<td>14(35)</td>
<td>18(45)</td>
</tr>
<tr>
<td>2. I have seen academic improvement in my child's performance at school in reading competency</td>
<td>40</td>
<td>1(2.5)</td>
<td>3(7.5)</td>
<td>9(22.5)</td>
<td>14(35)</td>
<td>13(32.5)</td>
</tr>
<tr>
<td>3. I have seen academic improvement in my child's performance at school in math/problem solving strategy</td>
<td>40</td>
<td>2(5)</td>
<td>4(10)</td>
<td>11(27.5)</td>
<td>12(30)</td>
<td>11(27.5)</td>
</tr>
<tr>
<td>4. I have seen academic improvement in my child's performance at school in writing</td>
<td>40</td>
<td>1(2.5)</td>
<td>4(10)</td>
<td>4(10)</td>
<td>21(52.5)</td>
<td>10(25)</td>
</tr>
<tr>
<td>5. I would continue to let my child participate in ESAC if there is no improvement in academic performance</td>
<td>40</td>
<td>4(10)</td>
<td>5(12.5)</td>
<td>7(17.5)</td>
<td>14(35)</td>
<td>10(25)</td>
</tr>
<tr>
<td>6. I think that ESAC hours are appropriate</td>
<td>40</td>
<td>1(2.5)</td>
<td>2(5)</td>
<td>6(15)</td>
<td>16(40)</td>
<td>15(37.5)</td>
</tr>
<tr>
<td>7. I think ESAC is an effective program</td>
<td>40</td>
<td>1(2.5)</td>
<td>1(2.5)</td>
<td>6(15)</td>
<td>18(45)</td>
<td>14(35)</td>
</tr>
<tr>
<td>8. I think every child should participate in EASC</td>
<td>40</td>
<td>1(2.5)</td>
<td>1(2.5)</td>
<td>7(17.5)</td>
<td>11(27.5)</td>
<td>20(50)</td>
</tr>
<tr>
<td>9. I think that ESAC can be improved with parents' involvement</td>
<td>40</td>
<td>1(2.5)</td>
<td>1(2.5)</td>
<td>7(17.5)</td>
<td>17(42.5)</td>
<td>14(35)</td>
</tr>
<tr>
<td>10. I would recommend this ESAC to other parents for their children</td>
<td>40</td>
<td>1(2.5)</td>
<td>2(5)</td>
<td>4(10)</td>
<td>15(37.5)</td>
<td>18(45)</td>
</tr>
</tbody>
</table>

*Note: N = validated total; SD = strongly disagree; D = disagree; U = unsure; A = agree; SA = strongly agree.*
Appendix E

Frequencies and Percentages of Responses
From Elementary School Academic Camp Teachers
## Frequencies and Percentages of Responses From ESAC Teachers

<table>
<thead>
<tr>
<th>Parent interviews</th>
<th>N</th>
<th>SD</th>
<th>D</th>
<th>U</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The ESAC helps to boost my students' academic achievement in the regular classroom</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>1(11)</td>
<td>3(33)</td>
<td>5(56)</td>
</tr>
<tr>
<td>2. The students attending ESAC show gains in test scores</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>6(67)</td>
<td>3(33)</td>
</tr>
<tr>
<td>3. The time spent in ESAC is meaningful to the students</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>4(44)</td>
<td>5(56)</td>
</tr>
<tr>
<td>4. Students show improvement in academic performance after ESAC</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>1(11)</td>
<td>4(44)</td>
<td>4(44)</td>
</tr>
<tr>
<td>5. ESAC helps to raise the students' reading grade level by one letter grade or more</td>
<td>9</td>
<td>0(0)</td>
<td>1(11)</td>
<td>0(0)</td>
<td>5(56)</td>
<td>3(33)</td>
</tr>
<tr>
<td>6. ESAC helps to raise the students' math grade level by one letter grade or more</td>
<td>9</td>
<td>0(0)</td>
<td>1(11)</td>
<td>0(0)</td>
<td>5(56)</td>
<td>3(33)</td>
</tr>
<tr>
<td>7. ESAC helps to improve students' writing performance by one letter grade or more</td>
<td>9</td>
<td>0(0)</td>
<td>1(11)</td>
<td>2(22)</td>
<td>3(33)</td>
<td>3(33)</td>
</tr>
<tr>
<td>8. I think more students should attend ESAC next year from different grades</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>5(56)</td>
<td>4(44)</td>
</tr>
<tr>
<td>9. ESAC is beneficial for students who are performing at or above grade level</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>7(78)</td>
<td>2(22)</td>
</tr>
<tr>
<td>10. I will recommend ESAC to parents</td>
<td>9</td>
<td>0(0)</td>
<td>0(0)</td>
<td>0(0)</td>
<td>2(22)</td>
<td>7(78)</td>
</tr>
</tbody>
</table>

*Note: N = validated total; SD = strongly disagree; D = disagree; U = unsure; A = agree; SA = strongly agree.*