The Impact Of An Intensive Literacy Program On The Sustained Reading Achievement Of Second Grade Students

Rita Cestaro Meehan
Seton Hall University

Follow this and additional works at: http://scholarship.shu.edu/dissertations

Part of the Curriculum and Instruction Commons, Educational Methods Commons, and the Elementary Education and Teaching Commons

Recommended Citation
http://scholarship.shu.edu/dissertations/1586
THE IMPACT OF AN INTENSIVE LITERACY PROGRAM
ON THE SUSTAINED READING ACHIEVEMENT OF
SECOND GRADE STUDENTS

BY

RITA CESTARO MEEHAN

Dissertation Committee
Elaine M. Walker, Ph.D., Mentor
James Caulfield, Ed. D.
Evelyn Ogden, Ed. D.
Robert Ranta, Ed. D.
Judith M. Zimmerman, Ed. D.

Submitted in Partial fulfillment of the
Requirements for the Degree
Doctor of Education
Seton Hall University

2004
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iv</td>
</tr>
<tr>
<td>DEDICATION</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>7</td>
</tr>
<tr>
<td>Research Questions</td>
<td>8</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>9</td>
</tr>
<tr>
<td>Variables</td>
<td>9</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>10</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>11</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>11</td>
</tr>
<tr>
<td>II. REVIEW OF RELATED LITERATURE</td>
<td>13</td>
</tr>
<tr>
<td>Literacy Overview</td>
<td>13</td>
</tr>
<tr>
<td>Phonics Approach</td>
<td>14</td>
</tr>
<tr>
<td>Linguistic Approach</td>
<td>14</td>
</tr>
<tr>
<td>Sight Word or “Look-Say” Approach</td>
<td>15</td>
</tr>
<tr>
<td>Basal Reader Approach</td>
<td>15</td>
</tr>
<tr>
<td>Language Experience Approach</td>
<td>16</td>
</tr>
<tr>
<td>Whole Language</td>
<td>17</td>
</tr>
<tr>
<td>Learners with Problems in Reading</td>
<td>18</td>
</tr>
<tr>
<td>Programs that Sees to Improve Reading Skills</td>
<td>20</td>
</tr>
<tr>
<td>Intensive Reading Programs</td>
<td>21</td>
</tr>
<tr>
<td>Reading Recovery</td>
<td>21</td>
</tr>
<tr>
<td>Success for All</td>
<td>22</td>
</tr>
<tr>
<td>Students Achieving Independent Learning (SAIL)</td>
<td>23</td>
</tr>
<tr>
<td>1000 Days to Success</td>
<td>23</td>
</tr>
<tr>
<td>The Academy</td>
<td>24</td>
</tr>
<tr>
<td>Effectiveness of Early Programs</td>
<td>26</td>
</tr>
<tr>
<td>Reading Recovery</td>
<td>26</td>
</tr>
<tr>
<td>Success for All</td>
<td>28</td>
</tr>
<tr>
<td>Students Achieving Independent Learning (SAIL)</td>
<td>30</td>
</tr>
<tr>
<td>1000 Days to Success</td>
<td>31</td>
</tr>
<tr>
<td>The Academy</td>
<td>32</td>
</tr>
<tr>
<td>Teacher Preparation for Work with Young Learners</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
III. RESEARCH DESIGN AND METHODOLOGY ..................................................37
   Introduction ..................................................................................................37
   Sample .........................................................................................................37
   Instruments ..................................................................................................38
   Data Collection ............................................................................................39
   Data Analysis ...............................................................................................41

IV. THE ANALYSIS OF THE DATA ................................................................44
   Introduction ..................................................................................................44
   Description of the Academy ........................................................................45
   Overview of Teacher Training ......................................................................47
   Research Question One ................................................................................49
   Description of the Focus Group ...................................................................50
   Focus Group Responses ................................................................................51
   Summary of Focus Group .............................................................................59
   Research Question Two ................................................................................60
   Short Term Effects of the Academy ..............................................................61
   Long Term Effects of the Academy ..............................................................64
   Summary .......................................................................................................78

V. CONCLUSIONS AND RECOMMENDATIONS ..........................................80
   Introduction ..................................................................................................80
   Recommendations .......................................................................................88
   Future Studies ............................................................................................99

References ......................................................................................................51

Appendices ....................................................................................................97
   A. Class Profile Sheets ...............................................................................98
   B. Parent invitation .....................................................................................99
   C. ILA Daily Schedule (Teacher) .................................................................100
   D. Registration Form ................................................................................101
   E. Letters of Solicitation ...........................................................................102

iii
Acknowledgements

The writing of a dissertation is a long, tedious, and stressful process. I am indebted to many friends and colleagues, too numerous to mention individually, who offered words of encouragement and support along my journey. My Cohort IV group was a particular source of strength and support. Their friendships continue to be a comfort in my life, especially those of Dr. Connie Donvito, Dr. Martha Galriel, Dr. Howard Schechter, and Ms. Diane Paszkowski.

This study was made possible by the wonderful district whose program I studied and I thank the Superintendent of Schools and the administration for their support and guidance and for making the data available for this research. I am also indebted to the collective work of a very dedicated cadre of teachers in the school system. I continue to be awed by their professionalism and dedication to the success of their students and acknowledge their contribution to this study. Their input as part of the focus group was invaluable. I am indebted to Shelli Fishman, Rebecca Hossler, Linda King, Janet Larkin, Jane Look, Kristen Pechar, Kathleen Schummann, and Katherine Whalen.

I owe a debt of gratitude to Dr. Karen Hartman Lau for her patience, expertise in reference skills and for assisting me for so many hours while I was working on my research. Very special thanks to Carlotta Miller, my dear colleague and friend, for her patience, perseverance and for the sense of detail and accuracy with which she read my dissertation. She is very special to me.

I am especially grateful to Dr. Chris Herte, colleague and friend, who has spent countless hours giving me expert guidance, support, and his mathematical expertise. His
knowledge of statistics was extremely beneficial in helping me achieve completion of this dissertation. I respect and admire him greatly.

I wish to thank my doctoral committee for their guidance in the writing of this dissertation. I am particularly grateful to dear Dr. Elaine Walker, who gave me the kind of caring and support I needed to forge forward after a difficult beginning. I will always remember her words that are embedded in my brain, "Rita, you must get it right!"

Very special thanks to dear Dr. Caulfield for believing in me and helping me to achieve my final goal—a doctoral degree. Dr. Caulfield will always have a very special place in my heart for his kindness and concern, his constant encouragement to me, and wonderful sense of humor.

Additionally, I wish to thank Drs. Robert Ranta, Evelyn Ogden, and Judy Zimmerman for their valuable input throughout the writing process. I extend a special thank you to Dr. Zimmerman for her critical reading, support, and friendship along the way, and to Dr. Ranta for his meticulous editing, support, and wonderful sense of humor that kept me plodding along this journey. Thank you to Dr. Ogden for her guidance and expertise on this worthwhile research.

Finally, I would like to extend my heartfelt gratitude to my family and friends for their encouragement and support along the way.

Lastly, I wish to acknowledge my very dear children, Michael and Kimberly. They are always a quiet inspiration to me and are always there to support my endeavors. I wish to thank them for their understanding, support, and endearing love throughout my years at Seton Hall. They are my inspiration—I have learned so much from both of them.
I encourage them to keep learning and fulfilling their dreams and thank them for helping me achieve mine!
Dedication

This is dedicated to the memory of my dear parents, Patrick and Frances Cestaro, from whom I have learned so much about discipline and hard work. Their love and guidance has always led me in the right direction.

This is also dedicated to the memory of dear Mr. Joseph Schintz and Mrs. Helen Schintz, from whom I have received the foundation and inspiration to become an educator. Their intense love, support, and guidance throughout my life have inspired me to become an educator and principal and they are forever in my thoughts.

Finally, this is dedicated to the memory of Seton Hall’s dear Patricia Lisanti. She will always be in my heart as I can still hear her words to me, “Hazard Zet Forward!” She made me promise I would finish my dissertation and so, dear Pat, I am keeping my word.
<table>
<thead>
<tr>
<th>TABLE</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phonemic Awareness and Sight Word Paired Samples Statistics</td>
<td>61</td>
</tr>
<tr>
<td>2</td>
<td>Paired T-Test for Phonemic Awareness and Sight Words</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>Sight Word List Frequency Table (Pre Academy)</td>
<td>63</td>
</tr>
<tr>
<td>4</td>
<td>Sight Word List Frequency Table (Post Academy)</td>
<td>63</td>
</tr>
<tr>
<td>5</td>
<td>Phonemic Awareness and Sight Words by Gender</td>
<td>63</td>
</tr>
<tr>
<td>6</td>
<td>T Test of Phonemic Awareness by Gender (Post Academy Test)</td>
<td>64</td>
</tr>
<tr>
<td>7</td>
<td>Grade 2 CTBS Reading 1999 Descriptive Statistics</td>
<td>66</td>
</tr>
<tr>
<td>8</td>
<td>ANOVA Grade 2 CTBS Reading 1995</td>
<td>66</td>
</tr>
<tr>
<td>9</td>
<td>Post Hoc Analysis of Grade 2 CTBS by Participation</td>
<td>67</td>
</tr>
<tr>
<td>10</td>
<td>Descriptive Statistics Grade 3 CTBS and Grade 4 ESPA</td>
<td>68</td>
</tr>
<tr>
<td>11</td>
<td>ANOVA for CTBS Grade 3 Reading and ESPA Language</td>
<td>68</td>
</tr>
<tr>
<td>12</td>
<td>Post Hoc Analysis Grade 3 CTBS Reading and Grade 4 ESPA Language by Participation</td>
<td>69</td>
</tr>
<tr>
<td>13</td>
<td>Grade 2 and Grade 3 CTBS Reading Scores for Academy Students</td>
<td>70</td>
</tr>
<tr>
<td>14</td>
<td>T Test of CTBS Reading for Academy Students</td>
<td>71</td>
</tr>
<tr>
<td>15</td>
<td>Grade 2 and Grade 3 CTBS Reading Scores for Non Academy Students</td>
<td>71</td>
</tr>
<tr>
<td>16</td>
<td>T Test of CTBS Reading for Non Academy Students</td>
<td>71</td>
</tr>
<tr>
<td>17</td>
<td>Grade 2 and Grade 3 CTBS Reading Scores for Random Control Students</td>
<td>72</td>
</tr>
<tr>
<td>18</td>
<td>T Test of CTBS Reading for Random Control Students</td>
<td>72</td>
</tr>
<tr>
<td>19</td>
<td>200! NJ ESPA Language Proficiency</td>
<td>73</td>
</tr>
<tr>
<td>20</td>
<td>Descriptive Statistics by Gender for Academy Students</td>
<td>74</td>
</tr>
<tr>
<td>21</td>
<td>Independent T Test by Gender for Academy Students</td>
<td>74</td>
</tr>
</tbody>
</table>
TABLE 22 Descriptive Statistics for Non Academy Students by Gender
TABLE 23 Independent Samples Test for Non Academy Students
TABLE 24 Descriptive Statistics for Random Control Students by Gender
TABLE 25 Independent T Test by Gender for Random Control Students
Chapter I

INTRODUCTION

Background of the Problem

Years of disagreement, debate, and controversy have surrounded the topic of learning to read and the approaches to best teach children to read. At the same time illiteracy in America has grown, and statistics show the ever-growing need for effective ways to teach children to read. According to the National Adult Literacy Survey, 42 million adult Americans cannot read; 50 million can recognize so few printed words they are limited to a 4th or 5th grade reading level; one out of every four teenagers drops out of high school, and of those who graduate, one out of every four has the equivalent or less of an eighth grade education (Sweet, Jr., 1996).

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001, the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since ESEA was enacted in 1965. No Child Left Behind creates strong standards in each state for what every child should know and learn in reading in grades 3 through 8. Student progress and achievement will be measured for every child, every year. President Bush described reading as “the new civil right,” and his education reform plan has placed a high priority on ensuring that every public school student learns to read as the foundation of his or her education.

“The most basic educational skill is reading. The most basic obligation of any school is to teach reading. Yet, earlier this year, we found that almost two-thirds of African American children in the 4th grade cannot read at basic grade level. For white children, that figure is 27 percent. The gap is wide and troubling, and it’s not getting any better. That
gap leads to personal tragedy and social injustice. In America, literacy is liberation, and we must set all our children free” (Bush, 2001, par. 1).

U.S. Secretary of Education Rod Paige (as cited in US Department of Education, 2002) called the No Child Left Behind legislation “the start of the most major reading reform ever conceived of in the United States-classroom instruction born of proven methods and funded with an unprecedented 300 percent increase in federal funding” (US Department of Education, 2002, par. 1).

Bush echoed Paige: “It’s time to fund curriculum and teacher training programs and reading programs not based upon what sounds good, or some theory, but based upon what works, so that children can learn to read in America” (US Department of Education, 2002, par. 3). The solution and centerpiece of Bush’s education reform is Reading First.

The Reading First program is intended to help states and school districts improve student achievement by implementing early reading instruction based on scientific reading research. The new program was recently passed into law by a bipartisan majority of Congress under the No Child Left Behind Act of 2001. President Bush has asked Congress for even more funding in his FY 2003 budget request - $1 billion – to fund the second year of the program. School districts need to apply and qualify for these grants. Designed to help close the achievement gap between disadvantaged and minority students and their peers, the new law will change the culture of America’s schools so that they define their success in terms of student achievement and invest in the achievement of every child. The act is based on four basic principles: stronger accountability for results, increased flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work.
years old (third grade). This level is considerably higher than what parents are being led to believe.

When children enter formal schooling, the opportunity for developing a richer vocabulary increases as teachers' rote model it, expect it, and make it part of the learning (Jensen, 1998). Teaching reading develops vocabulary skills if the child is ready to learn. For some learners' brains, the "normal" time to learn to read is age 3 or 4. For others, the "normal" time is age 8. There can be a spread in differences from a few months to 5 years in completely normal, developing brains. A 6-year-old who does not read might not be developmentally delayed (Jensen, 1998).

Snow, Burns and Griffin per references (1998) found that adequate initial reading instruction requires that children: use reading to obtain meaning from print, have frequent and intensive opportunities to read, are exposed to frequent, regular spelling-sound relationships, learn about the nature of the alphabetic writing system, and understand the structure of spoken words.

According to Snow et al (1998), excellent instruction is the best intervention for children who demonstrate problems learning to read. Excellent instruction is most effective when children arrive in first grade motivated for literacy and with the necessary linguistic, cognitive, and early literacy skills. In addition, high-quality preschool and kindergarten environments are crucial to instill the foundation to prepare children to learn. Excellent instruction in the primary grades and optimal environments in preschool and kindergarten require teachers who are well prepared, highly knowledgeable, and receiving ongoing support.
In Preventing Reading Difficulties in Young Children, Snow et al (1998) concluded that a critical element for preventing difficulties in young children is the teacher. Knowledge about the research foundations of reading is important and applying the knowledge base in practice while preparing for teaching is one way to help solve some of the reading problems. In addition, ongoing staff development is required for teachers to absorb the information about reading. Ongoing support from colleagues and specialists as well as regular opportunities for self-examination and reflection are critical components of the career-long development of excellent teachers. Support of teachers needs to be ongoing to ensure that teachers are well prepared to carry out their mission in preventing reading difficulties in young children.

With improving students' reading abilities as an impetus before children leave grade 3, school districts, administrators, and principals try to identify cost-effective ways to provide meaningful instruction. Some districts have approached the problem of children reading by the time they reach grade 3 by qualifying and applying for the Reading First grants. Other districts are implementing intensive reading programs during the school year, such as the Reading Recovery Program (Clay, 1994) and Success for All (Slavin & Madden, 2001) programs. Other districts have used federal funds, such as Title 1 aid, using a host of strategies to assist struggling readers. Other school districts provide traditional summer school programs where teachers work with students on various skills related to the student's grade level and the curriculum in that grade. The traditional summer remedial programs have as their objective increased reading abilities; however, they often lack a specific set of strategies that can be replicated.
2. How are the results related to the pedagogical strategies and materials that were utilized? If the strategies did work, why did they work and how does one explain their positive/negative effect?

Hypotheses

The null hypothesis is that there is no statistically significant difference between (a) the sustained reading improvement in second grade students who receive an intensive literacy program by teachers trained in specific comprehensive teaching strategies and (b) the reading improvement in second grade students who do not receive an intensive literacy program by teachers who are not trained in specific teaching strategies.

Variables

The criterion variable was the assessment of second graders on the Comprehensive Test of Basic Skills (CTBS) and ESPA.

Limitations of the Study

1. The study was limited to one group of second graders who participated and one group of second graders who did not participate for a three-year period in an intensive literacy program in one New Jersey public school district. By the end of the study, these students will be in fourth grade. Not included were second graders outside of the district or second graders in district who were participants or non-participants in other years.

2. There was no research in the sustained effect of this program. Nor has data from this program been analyzed over time. Research limited to pre and post-test data (before summer and at the end of the program) has been collected and analyzed each year for each class.
3. The findings of the study were limited to general education and did not include any other student who may have been enrolled in the intensive literacy program such as special education or English as second language students.

4. The study was limited to the findings of the effects of specific strategies utilized through the training of teachers and was not generalized to other variables such as age, socio-economic status, or gender.

5. The study was limited to results that were generalisable only to other second graders in the New Jersey public school district.

6. This study was based on a research-based homegrown district developed reading program that provides identical training to all teachers in the program resulting in consistent instruction to the participants. A public school district in a suburban area of New Jersey develops it.

The Significance of the Study

With such an emphasis on children learning to read before they enter grade 3, more and more school districts are searching for specific cost-effective programs to implement. If children are not reading by the time that they enter grade 3, they will experience failure not only in reading but in other curriculum areas as well. President Bush (2002) stated, "It's time to fund curriculum and teacher training programs and reading programs not based upon what sounds good, or some theory, but based upon what works, so that children can learn to read in America" (p1). With No Child Left Behind Act of 2001 (Bush, 2001) administrators are faced with even more pressure to address the needs of providing a program to ensure that all children learn to read by the time they are in grade three. Administrators need to think creatively and economically in
It is key that educators accomplish the task of teaching students to read before students reach grade 3. Developmentally children are ready to read fluently by 8 years old if they are given the experiences of being read to, if they attend preschool, and if they are taught the readiness skills to prepare them to be readers (McGill-Franzen, Allington, 2001). Therefore, one of the responsibilities educators are confronted with is to teach primary students how to read with fluency and how to use specific reading strategies to help them read and comprehend what is read, as they move through several reading tasks. Beginning readers require systematic, consistent reinforcement of reading strategies at their instructional and independent levels, as well as instruction in phonemic awareness (Lyon, 1998) and comprehension strategies (Fielding & Pearson, 1994). In addition, a great deal of positive support and encouragement is required in order for young learners to take risks so that they can achieve and sustain success and improvement in reading. A program that can be easily replicated is necessary to help school districts accomplish the goal of getting all students to read before they reach grade 3.

Purpose of the Study

The purpose of this study is to investigate and explore the impact of a reading program on second grade students' reading performance who attended an intensive literacy program. This study investigates the relationship between the reading comprehension in an intensive literacy program (the Academy) and the achievement gains of second graders in one public school district in the United States. The Academy is a homegrown, locally developed program that provides intensive reading instruction in the summer to those students who have not become independent readers as they enter third grade. Homegrown, locally developed program refers to research based instruction implemented through
precise training of teachers and monitored by individual developmentally appropriate assessments that is developed at the district’s school site. The program was designed to maximize the opportunity for the students to make the gains necessary to successfully enter the next grade in the fall, and in many cases accelerate learning so that students were above their peers in skills by the end of the program. By targeting students who needed remediation, eliminating the barriers to participation, and providing an intensive program based on research, students are expected to achieve these objectives. The program was developed by a local public school district in New Jersey. This study is longitudinal in that participants are followed for 3 years: 1999, 2000 and 2001, to determine whether their achievement had been sustained over that time. More specifically, this study compares the results of participants with second grade students who had not attended the Academy for the same 3-year period and who were not instructed by teachers who received specific training.

Research Questions

This study proposes to answer the following question:

What is the impact of an intensive research based summer reading program on the reading comprehension performance of second grade students who are reading below grade level? This study seeks to provide answers to the following sub questions.

1. What is the sustaining impact of the program on students' reading comprehension performance one year after and then two years after leaving the program as measured by the CTBS standardized achievement test in reading comprehension and the Elementary School Proficiency Assessment (ESPA)?
In his Testimony on Children’s Literacy, Lyon (1997) emphasized the deficits in effectively preparing teachers. Most teachers receive little formal instruction in reading development and disorders during either undergraduate and/or graduate studies, with the average teacher completing only two reading courses.

“At present, motivated teachers are often left on their own to obtain specific skills in teaching phonemic awareness, phonics, spelling, reading fluency, and comprehension by seeking out workshops or specialized instructional manuals. Many teachers report that they are tied to ‘packaged’ reading programs, regardless of the quality of the programs or their usefulness for all children because they do not understand the reading process well enough to augment the programs or to select different instructional strategies for different children” (p.15).

Lyon (1997) noted that teachers instructing children who display reading difficulties should be well versed in understanding the conditions that must be present for children to develop robust reading skills, and be thoroughly trained to assess and identify problem readers at early ages.

To integrate research-based instructional practices into their daily work, teachers need to include various components (Learning First Alliance Action Paper, 1998). These practices include: training in alphabetic basics, a proper balance between phonics and meaning in their instruction, strong reading materials, strategies for teaching comprehension, writing programs, smaller class size, curriculum-based assessment, effective group strategies, tutoring support, and home reading (Learning First Alliance, 1998).
The National Reading Panel (2000) named proven methods on how students learn to read. The panel concluded,

"Effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonic awareness), teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they have learned by reading aloud with guidance and feedback (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension" (National Reading Panel, 2000).

Other scholars supported the reading panel yet identified other conditions needed for literacy. "Most children will learn to read in the first years of school if individual needs and personal learning schedules are taken into account" (Clay, 1994). Early intervention, which includes individually, designed and delivered lessons, is a solution for minimizing children with difficulties in reading (Clay, 1994).

Therefore, the primary goal of literacy education is to teach primary grade students how to read with fluency and how to use specific reading strategies to help them read and comprehend what is read, as they move through several reading tasks. Reading is the product of decoding and comprehension and learning to read is a difficult task for children and for teachers who are faced with the challenge of teaching children to read (Lyon, 1998).

In Norms of Ability for Different Age Groups, (author, 1998) researchers reported that when there are no expectations, children find their own reading level. According to these findings, children were reading longer books, such as those divided into chapters by 8
order to provide the best possible program to meet the needs of the students in their
districts.

In spite of many attempts at intensive programs and of teacher training, there are
still students who are not reading by grade three. This study is significant since it will
identify an intensive, cost-effective program with specific reading strategies that can be
replicated easily by a district that requires an intervention program to help children learn to
read before they enter grade three.

Definition of Terms

Definitions of terms used in this study are provided to clarify their meaning as they
relate to this study.

Test of Cognitive Skills (TCS1)

Test of Cognitive Skills 1, is an index designed to measure cognitive skills.

*Intelligence Quotient (IQ)*

Intelligence Quotient (IQ) is defined as 100 times the Mental Age (MA) divided by
the Chronological Age (CA). IQ = 100 MA/CA. In other words, IQ is a ratio.

Comprehensive Test of Basic Skills, Fourth Edition - CTBS

Comprehensive Test of Basic Skills, Fourth Edition (CTBS/4) is a commercial test
series designed to measure achievement in the basic skills taught in schools throughout the
nation. The subject area measured in this study is reading. The test provides normo-
referenced information only and information about where a particular test taker's score falls
within the distribution that is typical for all children from around the country who are in the
same school grade.

Elementary School Proficiency Assessment
ESPA is the Elementary School Proficiency Assessment administered to fourth graders in the state of New Jersey and serves as a primary indicator for determining those students who may need instructional intervention within districts. A secondary purpose of the test results is to determine if individual schools are making adequate progress toward achievement of state-established standards. The Language Arts Literacy section of the test measures student achievement in reading and writing. Students read passages selected from published books, newspapers, and magazines, as well as everyday text, and respond to related multiple-choice and open-ended questions. There is one open-ended response item for each of the reading passages. The total ESPA Language Arts Literacy scores are reported as scale scores with a range of 100 to 300. The scale score of 250 is the cut point between Proficient students and Advanced Proficient students. The scale score of 200 is the cut point between Proficient students and Partially Proficient students. The score ranges are as follows: Advanced Proficient – 250-300; Proficient – 200-249; Partially Proficient-100-199. The scores of students who are included in the Partially Proficient level are considered to be below the state minimum level of proficiency and are reviewed to determine the need for additional instructional support for students.
Chapter II
REVIEW OF RELATED LITERATURE

The review of literature is divided into five sections: (a) Literacy Overview, (b) Learners with problems in reading, (c) Programs that seek to improve reading skills, and (d) Effectiveness of early programs and (e) Teacher preparation for work with young learners.

Literacy Overview

Reading takes on many meanings and when children are asked the definition of reading the concept on which they reflect most often is based on the kind of instruction they have received (Freppon, 1991). According to Snow et al. (1998), reading is a complex developmental challenge that we know to be intertwined with many other developmental accomplishments: attention, memory, language, and motivation, for example. Reading is not only a cognitive psycholinguistic activity, but also a social activity.

Chall (1967), in her noteworthy book, Learning to Read: The Great Debate, divided beginning reading approaches into two categories: (a) code-emphasis approaches, which focus on breaking the alphabetic code, which is phonics and (b) meaning-emphasis approaches, which focus on meaningful units rather than the alphabetic principle and letter-sound correspondences. Historically, there are four different approaches to teach children to read. One approach used in many pre-schools, as well as elementary schools, is the language experience/writing approach to reading. The other three include the phonics, basal, and literature approach to teaching reading.

Weaver (1994) divides approaches to teaching to read into Part-Centered Skills Approaches and Socio-Psycholinguistic Approach. The Part-Centered Skills Approaches...
include phonics, linguistics, sight word, basal reader (e.g., eclectic), and the Socio-Psycholinguistic Approach includes language experience.

**Phonics Approach**

The phonics approach was popular from about 1890 through 1920 and then began a revival in the mid-1960s when phonics lessons and activities were incorporated into basal reading programs. This approach emphasizes decoding of words; teaching students to learn the letter/sound correspondences so that they can sound out words independently. Flesch (1955), author of *Why Johnny Can't Read*, was an advocate of a phonics approach and believed that learning to read means learning to pronounce words. "Reading means getting meaning from certain combinations of letters. Teach the child what each letter stands for and he can read" (p. 12).

Examples of phonics programs include *Explode the Code* (Educators Publishing Service, 2003), which includes 12 workbooks preceded by three primers; *Distar* (Engelman & Bruner, 1975), which emphasizes sounding out words, and *Hooked on Phonics* (Gateway Learning Company, 2001-2004), which consists of eight cassette tapes, nine decks of flash cards depicting letters, letter sequences, and words and four books of word lists corresponding to phonetic features in the card decks and one book of sentences corresponding with the word lists.

**Linguistic Approach**

The linguistic approach was prominent in the 1950's. Leonard Bloomfield (1942) was widely known as the founder of structural linguistics. Advocates of this approach do not want children to stop and sound words out. Rather, they are concerned with helping children internalize regular patterns of spelling/sound correspondence (Weaver, 1994).
The linguistics approach is like a phonics approach in its emphasis on learning letter/sound patterns, with no specific attention to comprehension. Bloomfield insisted that children learn the code or the alphabetic principle. He believed we should begin with words that are spelled regularly from which the child can discover for himself the relationship between the sounds and the letters, for example, Nan, Dan, fan, man, introducing only one letter for one sound until it is mastered is recommended. Oral reading should be stressed over silent at the beginning, and the use of context and picture clues should be discouraged. The Bloomfield system contains no illustrations (Chall, 1983).

1. Sight Word or "Look-Say" Approach

This approach is concerned more with word identification than with meaning and was widely used from about 1930 until about the mid-1960's when it became intertwined with a phonics approach. It differs from a phonics approach in that it focuses on whole words rather than on parts of words. William Gray (1948) is an advocate of this approach. Sight word approach stresses helping children develop a stock of words that they can recognize on sight. To help children learn basic words such as and, I, and the, teachers use flashcards and other devices. Advocates of a sight word approach argue that if children can begin with a stock of about 100 basic sight words, they will be able to read about half the words in any text they may read (Weaver, 1994).

1. Basal Reader Approach

Basal reading programs have their roots in the early 1900's. There was a growing concern for developing "teacher-proof" materials for instruction and an interest in reconceptualizing education according to an industrial model, with schooling the assembly line, administrators the suppliers of curriculum and the monitors/managers of the process,
teachers the technicians applying the curriculum to students, and educated individuals the intended end product (Goodman, Shannon, Freeman, & Murphy, 1988).

In the late 1960's and early 1970's, the development of basal reading series became a multimillion-dollar business. Basal reading series include pupil texts with a variety of reading selections for grades K-6 or K-8, accompanied by teacher's manuals, pupil workbooks, tests, and a considerable array of supplemental materials. The readings in the basal are excerpts of literary works. Basal reading programs define reading as the mastery of skills, and they still exercise control over how those skills will be taught, practiced, and tested (Weaver, 1994).

Basal reading programs are eclectic, meaning they include various approaches. They include phonics—explicit teaching of letter/sound relationships, patterns, and rules; they may include emphasis on regularly patterned words, as in the linguistic approach; and they typically include elements of the sight word approach. An example of a basal program is *Lippincott's Basic Reading* (Weaver, 1994).

1. **Language Experience Approach**

The approach known as language experience (LEA) is associated with the name of Roach Van Allen. This approach has had several peaks of popularity; from about 1909 to 1918; in the late 1920's and early 1930's; and again from about the mid-1960's into the early 1970's. Today it is used along with other approaches; it is not used as a total approach.

The premise behind this approach is for beginners to bring their own knowledge and experience in constructing meaning from the printed word. The importance of relating the individual's oral language to written language and of relating reading to writing is
emphasized in the motto, "Anything I can say, I can write; anything I can write, I can read." The teacher begins by writing the experiences of the child or the class on a chart paper as they dictate. After the writing, the children read and re-read the writing that they composed together with the teacher until they could read it alone (Weaver, 1994).

1. Whole Language

Whole language is not considered an approach to teaching reading. Rather, it has developed into a comprehensive philosophy of education, drawing upon many more lines of research and encompassing far more than just the development of reading, or even literacy. Whole language educators think not about teaching reading but about guiding and supporting students in developing as independent readers, writers, and learners (Weaver, 1994).

Whole language is a curricular philosophy in which the teacher is an initiator and mediator of learning experiences and a curriculum developer who links the curriculum to the learner. Language is seen as central to learning; whole literature selections are used in reading programs; functional language, reading comprehension, and written expression are emphasized; and teachers and students, rather than textbooks and tests, are in control of the curriculum. There is no packaged set of materials to rely on. The teacher, with student information, must be the decision-maker. Students are involved in making choices, self-evaluating, and taking responsibility for their learning. Phonics is taught, but not separately from reading and writing. Spelling and grammar are viewed as means to an end (Newman & Church, 1990).
To implement a whole language approach, teachers need to know about language and literacy development, about language itself, about collaborative learning, about children's literature, about the reading and writing processes, and about language for learning across subject disciplines (Church, 1994).

Learners with Problems in Reading

Children will learn to read in the first years of school if the individual needs of the child are taken seriously and if there is attention given to personal learning schedules. Early intervention, which includes individually, designed and delivered lessons, is a solution for minimizing children with difficulties in reading (Clay, 1993).

Even so, reading problems are found in every classroom among all types of students; however, children with certain demographic characteristics are at greater risk of reading difficulties than others. It could be that biological deficits make the processing of sound-symbol relationships difficult or that there is poor reading instruction (Snow et al., 1998).

Felton and Wood (1992) evaluated the hypothesis that poor readers are characterized by poor nonword reading skills, but that a specific deficit in nonword reading will be found only in subjects whose reading is descrepent from intellectual ability. The authors measured the reading skills in 93 (64 male, 29 female) third-grade poor readers and 54 (17 male, 17 female) fifth-grade poor readers (with and without reading/IQ discrepancies) who were matched to 147 (81 male, 66 female) nondisabled first graders on word identification skills. The results showed third and fifth grade poor readers to be significantly more impaired than word-identification level match first graders on all
measures on nonword reading. These findings were not related to the verbal IQ level within the poor reader groups.

This study provided strong evidence for a deficit in nonword reading skills that is not explained by verbal intelligence. However, it fails to confirm the hypothesized relationship between intelligence/achievement discrepancy and degree of difficulty in nonword reading.

Shaywitz, Holfield, Holahan, Fletcher, Stuebing, Francis, and Shaywitz (1995) completed a longitudinal study of 445 kindergarten children and followed them for 7 years. The study discussed “The Matthew Effect” for IQ, which posits that the gap between good and poor readers widens over time, a view widely accepted as a model describing the developmental course of reading ability. The researchers found that children with a high overall average IQ tended to show an increase in their IQ over their education through Grades 1 to 5 and similarly, those with low overall IQ tended to show a decrement in IQ over these elementary grades. The researchers’ findings also suggest that poor readers are evident early and do not catch up in reading ability. The Matthew Effect indicated it was applicable neither to describing nor to predicting trends in reading ability over time; however, the researchers indicated from their current findings and from previous studies support for intervention programs.

Vellutino, Scanlon, and Lyon (2000) defined the results from a 6-year longitudinal study that incorporated a major intervention component to distinguish between cognitive and experiential deficits as basic causes of reading disability and found that IQ scores did not distinguish between impaired readers and normal readers or between impaired readers who were difficult to remediate and impaired readers who were readily remediated. In
addition, IQ scores did not predict reading achievement levels in the normally developing readers nor were they found to correlate very highly with measures of reading ability, especially measures of word identification and phonological decoding ability. Although the data presented in this article argue strongly against continued use of IQ-achievement discrepancies in the definition of reading disability, there may be something important about a child's intelligence, particularly with respect to how it interacts with that child's emotional and behavior response to failure. This study was another indication that demonstrated that when intensive remedial resources are made available to impaired readers representing a broad range on the intellectual continuum, response to remediation is not associated with measured intelligence. Other factors that merit further study could influence the outcome for any children with reading impairments.

Programs That Seek to Improve Reading Skills

According to Snow et al. (1998), adequate initial reading instruction requires that children: use reading to obtain meaning from print, have frequent and intensive opportunities to read, are exposed to frequent, regular spelling-sound relationships, learn about the nature of the alphabetic writing system, and understand the structure of spoken words. Yet, there is a wide range in the rate of adoption of educational innovations (Mort, 1953). This circumstance should not stop the process of trying to implement new ideas, specifically to help improve the reading ability of 8 year olds. Indeed, it took kindergartens about 50 years to reach complete adoption by U.S. schools (Mort, 1953).

There are some programs that school districts presently use as interventions to help those students who are not fluent readers. These programs include Reading
Recovery, Success For All, Students Achieving Independent Learning (S.A.I.L.), 1,000 Days, and The Academy.

Intensive Reading Programs

Reading Recovery

An early intervention literacy program, began in September 1984 by Professor Marie M. Clay, a New Zealand researcher and educator. The program came to the U.S. when Barbara Watson, National Director in New Zealand, and Dr. Clay, introduced Reading Recovery to the faculty at The Ohio State University and 16 teachers in the Columbus Public Schools. The program provided intensive, individual help to the lowest achieving first grade students in six Columbus, Ohio schools. The program has been in existence now for more than a decade and nearly a half-million children have received instruction and 15,000 teachers have participated in training (Lyons, 1998).

In Reading Recovery, a program-trained teacher provides one-to-one-tutoring in 30-minute daily sessions to the lowest 10 to 20% of a first grade class who have the prerequisite skills for Reading Recovery. Reading Recovery advocates claim that the program brings the lowest performing children up to the average level of their class by the end of first grade within 60 lessons, or 12 weeks. When students reach this goal, they are discontinued from the Reading Recovery program at which time the Reading Recovery teacher can take another student into the 30-minute slot. Each Reading Recovery-trained teacher, working a half-day with Reading Recovery, is expected to be able to tutor eight students in one year, though actual figures from the national data set indicate that the average number of students per teacher is much lower—5.5, or 11 students for a full-time equivalent teacher (Hiebert 1994).
There are three major issues that surround the Reading Recovery Program, which include the length of the teacher-training program, the cost of implementation and the long-term effects of the program for children.

Success for All

Is a school-wide, research-based reform model developed by Robert Slavin and his associates at Johns Hopkins University begun in 1987-88 school year. Its premise is that all students can and must succeed in the early grades (Slavin, Madden, Dolan, & Wasik, 1996). The program provides students with intensive instruction in language arts, extensive professional development to help teachers succeed with every student, and an active family support program (Weiler, 1998). Success for All now has over one quarter of a million American students that include 31 states and in 475 schools. The components of the Success for All program include a systematic reading program that emphasizes story telling and retelling (STAR), and language development activities such as phonics, vocabulary building, auditory discrimination, and sound blending using cooperative learning techniques; a daily 90-minute reading period with grade 1 to 3 students regrouped into homogeneous cross-grade ability groups; one-on-one tutoring in reading by specially trained certified teachers who work individually with students reading below grade level; assessments every 8 weeks to determine students’ reading progress, adjusting reading group placement and assigning a tutor if needed; professional development for teachers and tutors, which includes 3 days of inservice training and guidelines at the start of the school year, and follow-up training throughout the year; a family support team designed to provide parenting education, assist families of students experiencing personal or health-related problems, and support family involvement
in the school; a facilitator who works with teachers and staff in implementing the program; and an advisory committee comprised of the principal, facilitator, teacher and parent representatives, and family support staff that meets regularly to review program progress (Weiler, 1998).

Students Achieving Independent Learning (SAIL)

Is a program that helps students become successful readers by showing them steps they can take throughout the reading process to increase understanding. The Montgomery County, Maryland, Public Schools System developed the program. This program is a strategy-based program that emphasizes the whole reading process. Students use a simple but comprehensive repertoire of reading strategies. This program was sectioned into four stages of the reading process: getting ready to read, before reading, while reading, and after reading. Strategies by the kinds of decisions readers need to make were placed under each part of the reading process in each of the stages. The concept behind this program required teachers to teach reading as a decision-making process. Modeling by the teacher was a key component and getting students to select and use appropriate strategies while reading independently is a goal of the program (Bergman, 1993).

1,000 Days to Success

Is another intensive program that was developed by Stephen Kay, the principal of Scott Lane Elementary School, in Santa Clara, California. "Faced with low literacy levels, four schools issued a written guarantee; every entering kindergartner would be a competent reader by the end of 2nd grade." (Wheaton & Kay, 1999) p. 53.

The program is designed to provide an uninterrupted morning literacy block during which only literacy experiences tailored to meet the needs of every child are implemented.
Teachers focus on maximizing instructional time. According to Allington & Cunningham (1996) time efficiency is a crucial factor in school improvement.

1,000 days is the number of calendar days from the start of kindergarten to the end of 2nd grade. 180 days x 3 years = 540 days. 540 days x 2 hour literacy block = 1,080 hours. 1,080 hours / 4 guided reading groups = 270 hours. Therefore, the teacher is working with students on literacy with 4 groups for the 270 hours.

What seems to be most significant about this program is the intensive effort for those students who need extra help. Individual plans to follow students into special summer programs, before and after school programs, and beyond to the next grade level teacher are implemented to insure success for the child. Before this plan, students were just passed ahead to the next grade without any support to the student and without any guidance and instructions to the next year teacher.

1. The Academy – A Replicable Program

The Academy is an intensive program that includes two sessions during the summer. Each session consists of 3 weeks, 5 days per week, and 4 hours per day for a total of 60 hours of intensive instruction. This occurs during the last 3 weeks in July and the first 3 weeks in August. Students are recommended for the program by their classroom teachers based on class participation and tests and quizzes. Once a student is recommended an evaluation of her/his portfolio scores takes place. If the student is more than 6 months below grade level as measured by individually administered running record and recommended by the teacher, then she/he is eligible for the program.

A trained staff consisting of a summer school coordinator with a strong background in reading as well as an instructional leader and successful classroom teachers are selected
to lead the Academy. A four-day training workshop is offered at the end of June for the teachers who implement the summer program. Teachers are trained in specific reading strategies. One to one diagnosis of the strategies that students are currently using takes place first. Individual assessments enable teachers to plan a strategic individual program for each child in reading comprehension. Since word attack is an important component of reading comprehension, in order to instruct students in alphabetic principles and how words work, teachers learn how to use the McCracken and Make A Word Programs. These programs start with beginning and ending sounds. Through dictation and manipulation of letter cards phonemic awareness is developed, so that students are able to create and recognize monosyllabic words. The Reciprocal Thinking Comprehension Method is continuously modeled until students are able to follow the procedures of predict, clarify question, and summarize independently. Students also learn to connect what they are reading to their own lives and experiences to other books they have read and to the world around them. The Academy follows a modified Reading Recovery model in which the teacher works one to one with a child. The daily session begins with a previously read book to develop confidence and fluency, a running record to diagnose strategies that are part of the child’s repertoire, teach a new strategy. Structured centers where students have an opportunity to practice the skills taught during individual, small group, and whole group instruction is also provided. A daily schedule that incorporates all these components is given to the teachers to follow.

Each child attends the Academy for 4 hours every day for the 3 weeks. There are no interruptions. Teaching takes place even during snack time. Small classes, no more than eight students, are essential as the ratio allows the staff to work individually with each.
student every day for a minimum of 20 minutes. The coordinator of the Academy makes
daily formal and informal visits to the classrooms. Every teacher receives a formal written
evaluation. Teachers have a specific program that they follow daily. Plan books are
collected weekly. During the 4 days of training, the coordinator discusses the strategies that
are used during the summer. Each week, nominated students receive positive awards for
performance. The coordinator announces the students’ names and the specific
accomplishment over the public address system.

At the conclusion of the 3-week session every student receives a packet of work
to complete at home plus a book to read. These are to be returned to the child’s home
school on the first day of school. Parents receive a letter explaining the assignment and
the importance of students reading to maintain the skills they had achieved at the
Academy. In addition, the coordinator calls every parent to ask if he/she has any
questions regarding the assigned work. Parents are also informed that additional work is
available, if needed.

Effectiveness of Early Programs

There has been some research on the programs that seek to improve reading skills.
Below will be the findings of what the research says about Reading Recovery, Success
For All, Students Achieving Independent Learning (SAIL), 1,000 Days, and The
Academy.

1. Reading Recovery

Wasik and Slavin (1990) reviewed research on five one-to-one tutoring programs
one of which was Reading Recovery. The Ohio State group conducted two longitudinal
studies comparing Reading Recovery to traditional Chapter 1 pullout or in-class methods.
The first (pilot) study (Huck & Pinnell, 1986; Pinnell, 1988) of Reading Recovery involved 21 teachers trained by Marie Clay who worked in six inner-city Columbus, Ohio, schools. Each school provided a Reading Recovery class and a matched comparison class. The lowest 20% of students in each class served as the experimental and control group, respectively. Students were pre-tested in September and December 1984, but the tutoring did not begin until the spring semester, 1985.

The second longitudinal study (DeFord, Pinnell, Lyons, 1988; Pinnell, Short, Lyons, & Young, 1986) involved 32 teachers in 12 schools in Columbus. Twelve of these teachers had been tutors in the pilot cohort. In this study, students in the lowest 20% of their classes were randomly assigned to Reading Recovery or control conditions. The research design originally made a distinction between students in the experimental and control groups who had Reading-Recovery trained versus non-Reading Recovery trained teachers in their regular reading program. However, there were no differences on this factor, so the analyses focused on tutored versus untutored children, regardless of who their regular reading teacher was.

The students who succeeded in Reading Recovery, those categorized as discontinued, were performing on average at a level like that of their classes as a whole, and substantially better than the comparison group of low achievers. On the other hand, all of the not-discontinued students (who had at least 60 tutoring sessions but failed to achieve at the level of the rest of their class) were still below the level of their classmates by the third grade and were substantially lower than the control group. These net-discontinued students represented 27% of the former Reading Recovery students tested in the third grade in the second cohort study (DeFord et al., 1988).
Another study conducted by the Ohio State group (Pinnell, Lyons, DeFord, Bryk, & Setzer, 1991) evaluated the full program in comparison to three alternative programs and a control group in 10 Ohio school districts. It was determined that the students who had teachers who received more extensive training out-performed students who had teachers in the 2-week program.

Handerhan (1990) conducted a socialistic analysis of teachers and children in Reading Recovery tutoring sessions. The sessions were videotaped and sessions of four of the most and least successful teachers were analyzed. Handerhan found that across tutors there was consistency in how they structured the lessons regarding language, materials, and procedural techniques. However, more successful tutors showed greater variability in the strategies they used and the less successful tutors engaged more in presenting letters and words as discrete skills without reading for meaning. This study is important because it documents the variability in instruction during tutoring as well as identifying what behaviors are necessary to be a successful tutor helping children learn to read.

1. Success For All

Briggs and Clark conducted an analysis of the available studies on Success For All (SFA) in 1997. Their findings were:

1. In most of the 23 schools and nine districts in which studies compared SFA and control students, SFA students scored significantly higher on reading tests than students in control groups. On average, SFA 1st graders were three months ahead of students in control groups. By the time they reached 5th grade, SFA students were more than a full grade ahead of control students.
2. The original Baltimore SFA schools showed substantial reductions in retention rates. Schools that had more resources for implementing SFA were more successful in reducing retention than schools with fewer resources. Among five SFA schools, retention rates ranged from 0 to 1.9%. Previously these schools had retention rates of 6.7 to 10.7% (Briggs & Clark, 1997).

In 1996, Smith et al. evaluated SFA's effects on students' reading achievement in four cities. This independent study measured student achievement using matched groups of students in grades K-2. The sites included one school in Tennessee, two schools in Indiana, four schools in Alabama and two schools in Idaho. The Tennessee school implemented SFA for 3 years (1990-1993), while the other schools implemented the program for 2 years (1991-1993). Nationally standardized reading test batteries (Woodcock Reading Mastery Test and Durrell Analysis of Reading Difficulty) were used to measure achievement. The findings were as follows:

3. In three of the four sites, SFA students showed greater achievement than students in the control groups at the four sites.
4. Achievement was most marked for students who ranked below the 25th percentile.
5. According to the evaluators, however, "SFA effects were not as strong and consistent as those obtained in the original studies. This research suggests that SFA can be implemented in sites geographically removed from the developers and apart from their direct supervision, but that continual monitoring and support of the program's quality is needed to ensure success over time" (Smith, Ross, & Casey, 1996) p. 333.

Slavin (2001) evaluated the outcomes of 23 SFA schools in nine districts in eight states. His findings were as follows:
1. SFA students showed significantly greater gains in achievement over matched control students in all districts.

2. Effect sizes increased with the number of years of implementation – the longer children are in the program, the better they do.

Pogrow (2008) questioned the rationale underlying the research that supports SFA program since most of it has been furnished by Slavin, the founder of the program, and others in and associated with his research center. Pogrow argues that it was Slavin’s research that was the driving force behind the current push for schoolwide models and comprehensive reform.

“This makes the question of whether SFA is truly supported by research an issue of general concern for the education profession and for education policy. If the program is not well supported by research, a couple of questions become crucial: Is the current ‘research-based’ policy in education a wise one? Is government action favoring certain school wide programs and approaches appropriate? If the program is not as effective as claimed, these guidelines are pushing grantees to engage in practices that may not aid learning”(p.26).

1. **Students Achieving Independent Learning (SAIL)**

There has been very little research on the effectiveness of this program as compared to the other programs. Concept-Oriented Reading Instruction: An Integrated Curriculum to Develop Motivations and Strategies for Reading (CORI) included SAIL as part of its study in comparing it to two other modes of reading instruction, one based on schema theory, in which background knowledge is emphasized, and one based on strategy learning, SAIL. When comparisons of instruction were made, the SAIL program
year. The elements that attributed to the success of this program included a variety of resources: counseling interventions, uninterrupted literacy blocks, staff development, cross-age tutoring, volunteer reading buddies, and the Waterford Early Reading Program software. The Waterford program offered a multiple intelligences approach to teaching reading, particularly its use of music and this program was particularly helpful to the kindergartners who have never been read to and did not even know the letters of their own names. In addition, the school shifted from a school in which teachers were responsible for only one classroom of children to a school where all grade-level teachers are responsible for all children in that grade. There is a 2-hour literacy block every day and teachers work together to regroup students as much as necessary in order to level their reading and writing instruction. A literacy coordinator began the 1997-98 school year and provided 40 hours of early literacy instruction for all K-2 teachers. The program began with a 4-hour class, then for 36 weeks the staff met for 1 hour each week. Everyone was talking the same talk. The final component for the success of the program was based on the school having Parent and Teacher Student Study Teams (PATS) to focus on the needs of individual students. The literacy coordinator chairs the meetings and the classroom teacher and other teachers as well as parents attend to discuss the needs of the students. These meetings are more frequent now as parents meet one hour before school weekly (Burnmark, 2001).

1. The Academy

This study will present the first formal research about The Academy. No written research has been done on this program to date.
It is key that educators accomplish the task of teaching students to read before they reach grade three. Developmentally, children are ready to read fluently by eight years old if they are given the experiences of being read to, if they attend preschool, and if they are taught the readiness skills to prepare them to be readers (McGill-Franzen & Allington, 2001). Therefore, one of the responsibilities educators are confronted with is to teach primary students how to read with fluency and how to use specific reading strategies to help them read and comprehend what is read as they move through several reading tasks. Beginning readers require systematic, consistent reinforcement of reading strategies at their instructional and independent levels, as well as instruction in phonemic awareness (Lyon, 1998) and comprehension strategies (Fielding & Pearson, 1994). In addition, a great deal of positive support and encouragement is required in order for young learners to take risks so that they can achieve and sustain success and improvement in reading.

According to Snow et al (1998), excellent instruction is the best intervention for children who demonstrate problems learning to read. Excellent instruction is most effective when children arrive in first grade motivated for literacy and with the necessary linguistic, cognitive, and early literacy skills. In addition, high-quality preschool and kindergarten environments are crucial to instill the foundation to prepare children to learn. Excellent instruction in the primary grades and optimal environments in preschool and kindergarten require teachers who are well prepared, highly knowledgeable, and receiving ongoing support.

Additionally, effective teachers are able to combine a variety of instructional strategies to meet the varying needs of their students by including a common menu of
was characterized by sustained instruction in several cognitive strategies. The dimension of peer-peer interaction was not part of the design of this instruction, and student interaction occurred only at brief periods at the middle and end of the instruction as students consolidated their understandings of the content of the text. Activating background knowledge occurred at the end of the instruction, as the teacher helped the students make connections between the text and their personal experiences (Guthrie & Wigfield, 1997).

1. **1,000 Days**

1,000 Days began in 1997 at Scott Lane School that is located in Santa Clara, California. About 70 percent of the students receive federally subsidized lunches. Half of the students are learning English as a second language, with 23 native languages spoken on campus. The school has the most “at-risk” population in the school district. The Literacy Observation Survey that was administered quarterly, district-wide. Teachers administer the survey themselves and immediately have the results and that means teachers can quickly make needed changes in their classrooms. The book level benchmark used for the end of second grade is Level 22, 5 percent accuracy/Independent Reading. The following were the Literacy Observation Survey Results: On May, 1997, 42 percent of the second graders were at/above grade level, on May 1998, 67 percent of the second graders were at/above grade level, on May 1999, 75 percent of the second graders were at/above grade level, and on May 2000, 38 percent of the second graders were at/above grade level.

Results in the Scott Lane School have been dramatic in improvement. The school moved from the bottom of the district in ranking on reading-text level to fourth in the first
materials, strategies, and environments. According to Snow et al. (1998), our most important challenge as a society is to make sure that our teachers have access to those tools and the knowledge required to use them well. In other words, there is little evidence that children experiencing difficulties learning to read, even those with identifiable learning disabilities, need radically different sorts of supports than children at low risk, although they may need much more intensive support.

Snow (1998) also states that a large number of students who should be capable of reading would be reading if adequate instruction was available to them. Carroll (1963) noted three decades ago that if the instruction provided by a school were ineffective or insufficient, many children would have difficulty learning to read unless additional instruction is provided in the home or elsewhere.

Lyon’s (1997) Testimony on Children’s Literacy emphasizes the deficits in effectively preparing teachers. Most teachers receive little formal instruction reading development and disorders during either undergraduate and/or graduate studies, with the average teacher completing only two reading courses.

“At present, motivated teachers are often left on their own to obtain specific skills in teaching phonemic awareness, phonics, spelling, reading fluency, and comprehension by seeking out workshops or specialized instructional manuals. Many teachers report that they are tied to ‘packaged’ reading programs, regardless of the quality of the programs or their usefulness for all children because they do not understand the reading process well enough to augment the programs or to select different instructional strategies for different children”
Lyon (1997) had noted that teachers instructing children who display reading difficulties should be well versed in understanding the conditions that must be present for children to develop robust reading skills, and be thoroughly trained to assess and identify problem readers at early ages.

To integrate research-based instructional practices into their daily work, teachers need to include various components according to A Learning First Alliance Action Paper (Lyon, 1997). These practices include: training in alphabetic basics, a proper balance between phonics and meaning in their instruction, strong reading materials, strategies for teaching comprehension, writing programs, smaller class size, curriculum-based assessment, effective group strategies, tutoring support, and home reading.

In *Preventing Reading Difficulties in Young Children*, Snow et al. (1998) conclude that a critical element for preventing difficulties in young children is the teacher. Knowledge about the research foundations of reading is important and applying the knowledge base in practice while preparing for teaching is one way to help solve some of the reading problems. In addition, ongoing staff development is required for teachers to absorb the information about reading. Ongoing support from colleagues and specialists as well as regular opportunities for self-examination and reflection are critical components of the career-long development of excellent teachers. Support of teachers needs to be ongoing to ensure that teachers are well prepared to carry out their mission in preventing reading difficulties in young children.

Miller and Ellsworth (1985) did a 2-year study on an in-service model that would successfully alter teacher knowledge, attitudes, behavior and performance. The study included information pertaining to several research questions and the information was
collected through detailed pre-assessment of demographic factors, pre and post-assessment of teachers' knowledge of reading instruction and attitudes toward a wide range of reading-related issues, assessment of teacher implementation of specific teaching techniques, and assessment of student achievement. The study was concerned primarily with determining if a long-term in-service effort, where participation was voluntary, could produce measurable differences in teachers and their students.

First, there is definite evidence that teachers who chose to participate in this extensive in-service differed from teachers who did not participate. Second, there is reasonably direct evidence to support the notion that the in-service program produced measurable differences between participants and non-participants in terms of knowledge and selected attitudes. Lastly, student achievement scores at the end of the in-service showed differences between students who were taught for two years by participating and nonparticipating teachers. Results favored the students of participating teachers, and although the findings must be considered tentative because of the post hoc nature of this analysis, the results is consistent with expectations developed from other areas of this study.
Chapter III
RESEARCH DESIGN AND METHODOLOGY

Introduction

This chapter describes the participants, instruments, and procedures applied in this qualitative and quantitative study. The purpose of this study was to investigate and explore the impact of an intensive reading program on second grade students’ reading performance who attended an intensive literacy program. This study investigated the relationship between the reading comprehension in an intensive literacy program (the Academy) and the achievement gains of second grade students in one public school district in Central New Jersey.

Sample

Students were selected from an I district factor group in a suburban school district in New Jersey with eight elementary schools. To determine eligibility for the Academy second grade students are identified by the primary literacy score they received on the district’s Primary Assessment Portfolio in March. Both genders were accepted into the program. Parents were notified of their child’s eligibility and are informed that their child may attend the Academy and that transportation was provided. Students from any of the eight elementary schools who qualified were entitled to attend.

For the purpose of this study, 24-second grade students who attended the Academy in 1999 were studied for the year 2000 and 2001. Student identification numbers were used to identify the 24-second grade students studied. In addition, nine second grade students who were accepted into the Academy in 1999, but did not attend, were studied for
the year 2000 and 2001. Student identification numbers were used to identify these ninth-grade students.

Teachers were selected for this program by their willingness to learn specific strategies and to incorporate them into their repertoire. The supervisor of language arts/English selected the teachers for the Academy and the same teachers were rehired for the second year in order to maintain continuity in the program. Each teacher was trained in the same strategies in order to provide consistent instruction to all students attending the program. The initial training was for 3 days and included the modeling of specific strategies that were to be used in the program. These strategies included running records, reciprocal teaching, reading recovery methods for one-to-one instruction, and phonetic strategies. A daily schedule was given to teachers. Teachers were given an opportunity to practice the strategies and discuss when they would teach each strategy during the day.

Samples of student portfolios were given to teachers and discussions were held on how to score them. Each student received 15 to 20 minutes of one-to-one intense instruction that was one of the most important components of the daily schedule. Teachers were given time to set up their classrooms and materials as part of the three day training.

Instruments

Since the same students were followed for 3 years the test scores were taken for the same students over this time. The following instruments were used: (a) 1996 CTBS NCE score for second graders; (b) 2000 CTBS NCE score for the same students who are now third graders; (c) 2001 ESPA scores for the same students who are now fourth graders. In addition, interviews were conducted in a focus group of teachers who were part of the
Academy and those who were not in the Academy. Teacher questions for those who taught in the Academy were:

1. How long have you been teaching?
2. How long have you been teaching that particular grade?
3. Is this the first time you are teaching in the Academy?
4. Why did you apply for the Academy?
5. What strengths do you bring to the Academy?
6. Were you involved in the design of the Academy?
7. What did you find most helpful about the training program of the Academy?
8. Did you feel prepared to teach your students how to read after the training? What did you learn?
9. Tell me what you consider to be the most important component of the training you received for the Academy.
10. How long was the training, who did the training, and how many teachers were involved in the training? Were you given an opportunity to practice what you learned?
11. After teaching in the Academy, was there anything that you felt you didn’t learn or could be added to the training?
12. Do you think the training taught you how to teach your students to read with success? How did you measure their success? How did you keep records of their success?
13. Could you teach other teachers how to teach reading from your training? Could you transfer what you learned in the Academy to other teachers and to your classroom?

Teacher questions for those who did not teach in the Academy
1. How long have you been teaching?
2. How long have you been teaching that particular grade?
3. Did you teach in the Academy?
4. Think back to 1999 and 2000 and tell me how you taught your students to read.
5. What methods did you use to teach reading? Be specific.
6. Do you feel your students learned how to read effectively? How do you know?
7. How did you assess your student's ability in reading?
8. Now that you have learned new strategies for teaching reading the past 2 years, do you feel these strategies are more effective than what you used in 1999?

Data Collection

To answer the question, whether an intensive literacy program provided sustained reading comprehension improvement in second grade elementary school students reading comprehension who were instructed by teachers trained in specific comprehension strategies as compared to second grade students who did not attend the intensive literacy program and who did not receive the benefit of instruction from teachers who were trained in specific literacy strategies, the Comprehensive Test of Basic Skills (CTBS) reading test scores were collected and studied for 2 years, 1999, 2000. The Elementary School Proficiency Assessment (ESPA) scores were used for 2001 since these students were in grade four in 2001 and the state-district mandated ESPA is administered in that grade.

Data was collected from the public school district in New Jersey. A letter was written to the superintendent of the public school district requesting permission to conduct
this study. All students were anonymous throughout the study, and data collected was kept confidential and in a secure place throughout this study (See Appendix A). The two groups of second grade students, those who attended the Academy and those who did not attend the Academy, were given a code number for identification purposes in the study. The code numbers that identify the students were used throughout the study.

Data collected was analyzed using the SPSS Program. To determine whether or not the Academy was making a difference, an independent t-test statistics was conducted to compare the CTBS reading level scores of students and the ESPA reading scores of Academy participants and non-participants. Data by grade level were disaggregated to determine whether there were any statistical differences between grade levels. Comparison of the means of grades three, four, and five were also studied.

The study also analyzed whether the reading achievement gains were made by those students who attended the Academy and if that achievement was sustained as the students moved from second grade (1999), to third grade (2000) and finally to fourth grade (2001).

A focus group was held to collect data from the teachers. The questions stated above were asked of all teachers and were analyzed and these findings will be written in Chapter IV.

Data Analysis

The research question is what is the impact of an intensive summer reading program on the reading comprehension performance of second grade students who are reading below grade level? For answers to this question this study sought to provide answers to the following sub questions.
1. What is the sustaining impact of the program on students' reading comprehension performance one year after and then two years after leaving the program as measured by the CTBS standardized achievement test in reading comprehension and the Elementary School Proficiency Assessment (ESPA). In answering this question an independent t test was used with the second grade students in 1999 to establish baseline, then these results were compared to the results of the 2000 administration of the test to the same students who were then third graders in 2000 and then comparing to the 2001 results for the same students who would be fourth graders.

2. What were the pedagogical strategies and materials that led to the success of the program? Why did it work and how do you explain its positive effect? In answering this question, a focus group was held with teachers in the Academy and those who were not trained for the Academy. Teacher questions for those who taught in the Academy were:

1. How long have you been teaching?
2. How long have you been teaching that particular grade?
3. Is this the first time you are teaching in the Academy?
4. Why did you apply for the Academy?
5. What strengths do you bring to the Academy?
6. Were you involved in the design of the Academy?
7. What did you find most helpful about the training program of the Academy?
8. Did you feel prepared to teach your students how to read after the training? What did you learn?
9. Tell me what you consider to be the most important component of the training you received for the Academy.
10. How long was the training, who did the training, and how many teachers were involved in the training? Were you given an opportunity to practice what you learned?

11. After teaching in the Academy, was there anything that you feel you didn’t learn or could be added to the training?

12. Do you think the training taught you how to teach your students to read with success? How did you measure their success? How did you keep records of their success?

13. Could you teach other teachers how to teach reading from your training? Could you transfer what you learned in the Academy to other teachers and to your classroom?

Teacher questions for those who did not teach in the Academy

1. How long have you been teaching?

2. How long have you been teaching that particular grade?

3. Did you teach in the Academy?

4. Think back to 1999 and 2000 and tell me how you taught your students to read.

5. What methods did you use to teach reading? Be specific.

6. Do you feel your students learned how to read effectively? How do you know?

7. How did you assess your student’s ability in reading?

8. Now that you have learned new strategies for teaching reading the past 2 years, do you feel these strategies are more effective than what you used in 1999?

Chapter IV

THE ANALYSIS OF THE DATA

Introduction

The purpose of this study was to investigate and explore the impact of an intensive literacy program on second grade students' longitudinal reading performance. This study investigated the relationship between the reading comprehension in an intensive literacy program (the Academy) and the achievement gains of second graders in one public school district of Central New Jersey in the United States. The Academy was a homegrown, locally developed program that provided intensive reading instruction in the summer to those students who had not become independent readers as they entered third grade. Homegrown is defined as research-based instruction implemented through precise training of teachers and monitored by individual developmentally appropriate assessments by the district. The program was designed to maximize the opportunity for second grade students to make the gains necessary to successfully enter the next grade in the fall, and in many cases accelerate their learning so that they are above their peers in skills by the end of the program. By targeting students who needed remediation, eliminating the barriers to participation in the Academy, and providing an intensive program based on research, students were expected to achieve these objectives.

Although the population of the Academy participants was small, this study was important since it established baseline data and analysis and set the foundation to look at the same students over a period of time and followed their progress throughout their elementary grades. In this way, these students could be studied for multiple years and help to assess what components to include or delete from the Academy. Baseline data of Academy students and Non Academy students were collected in order to understand the
impact of Academy participation on reading achievement. Collecting and analyzing baseline data on student achievement was essential for program evaluation. Additionally, this study established research for future years of study for this program. Such information included the types of materials to use, the elements in teacher training, and who should attend the Academy. It was anticipated that this information would help to improve the program and therefore improve the achievement of the students who attended the program.

For the purpose of this study, 24-second grade students who attended the Academy in 1999 were studied for the year 2000 and 2001. In addition, nine-second grade students who were accepted into the Academy in 1999, but did not attend, were studied for the year 2000 and 2001. In the Academy there are 11 male and 13 female students. There were nine students who did not attend the Academy (No Academy).

There was also a random control group that included 30 higher achievement students who did not qualify for the Academy, and therefore did not attend the Academy.

Description of the Academy

The Academy was an intensive program that was designed to maximize the opportunity for the students to make the gains necessary to successfully enter the next grade in the fall. A director was hired who had experience in reading and administration to plan the program and identify the students who attended the Academy. She/he also continued to coordinate the program for the six weeks that the students attended. In addition to a director, a nurse was also available for the 6 weeks of the program. No food was served during this program however snacks that were brought from home were eaten during the sessions.
The Academy was presented to the Board of Education as a worthy program to improve student achievement and also as a strategy to adhere to State/Federal legislation. The Board of Education was informed in regard to the major components: small class size and specific schedules/materials. Outstanding teachers in the district were selected to teach the students in the Academy. The Board of Education approved the program in 1999 and gave the Academy the monetary backing that was needed to help get started.

Each session in the Academy consisted of 3 weeks, 5 days per week, and 4 hours per day for a total of 60 hours of intensive instruction. Each child attended for 4 hours every day with no interruptions. Teaching went on even during snack time. The Academy was held from the last 3 weeks of July until the first 3 weeks of August. This allowed students the opportunity to participate in family vacations. Many of the students who were recommended for summer school in the past could not attend because of lack of transportation. Therefore, transportation was provided for the students at no charge. Since many of the students attend day camps after the Academy, transportation was provided directly to the day camps as an added service and incentive to attend.

The criteria for inclusion in the program was based on the literacy scale from the district’s Primary Assessment Portfolio for grades K-2 and the length of time that a child had been enrolled in basic skills for students who were in grades 3, 4, and 5. There were also special accommodations made for students new to the district. One to one assessments were administered to students to determine eligibility. Students throughout the year were assessed by Running Records, a Sight Word list, and Phonemic Awareness test and a writing sample to establish a Literacy scale score. Classroom teachers assessed each student and maintained a portfolio including specific assessment data and
interventions used. This assessment data for each child was recorded on a Class Profile Sheet that was shown in Appendix A. The Class Profile Sheet was submitted to the supervisor of Language Arts for review. Through input of the reading specialist and elementary teachers students were recommended for the Academy. Based on the data the supervisor of Language Arts determined which students qualified to attend the Academy. Letters of invitation to the Academy were mailed home via the U.S. postal service. The invitation asked parents to attend an informative meeting held at the school where the Academy would be held. A presentation was conducted for the parents on the purpose of the Academy, the nature of the Academy, and specific student activities. This meeting also served as a forum for parents to register their children using the invitation shown in Appendix B as a registration form. Two hundred and fifty parents attended the Parent Orientation and most students were registered at that time.

Class size was another important feature of the Academy. The small classes allowed the staff to work individually with each student every day for a minimum of 20 minutes. Low teacher/student ratio and an instructional aide shared among three teachers enabled the staff to work with students in small, flexible, guided reading groups. This model provided the teacher an opportunity to have an on-going assessment process. By monitoring progress and providing appropriate instruction teachers were able to ensure that every student who entered school in September was able to perform at grade level.

Overview of Teacher Training

A well-trained staff consisted of a summer school coordinator with a strong background in reading that served as the instructional leader and highly, successful elementary teachers who delivered the intensive instruction. There was a 3-day training
session for teachers before the start of the Academy. In addition, the coordinator provided on-going training for the staff to ensure the quality and consistency of instruction. Teachers were paid the daily contractual rate for the training, which was $45.00 per half-day.

The Academy program provided in-depth instruction in phonemic awareness, comprehension strategies, and daily writing. Teachers used the McCracken and Make a Word programs for phonemic awareness, and the reciprocal thinking comprehension method for clarifying words and meaning. The Reading Recovery model was used for one to one instruction. Centers were created to facilitate structure for independent work. McCracken and Make a Word were programs that focus on improving phonemic awareness by giving students drill and practice with the sounds of letters and then expanding into making words with the letters. These programs used a hands-on approach whereby students used a dry erase board with the McCracken program and actual movement of alphabet letters with the Make a Word program to form words as the teacher gave clues.

The teachers were given a daily schedule (see Appendix C) to follow that incorporated all of these components. In order to address specific needs of students, teachers were required to write plans and these plans were collected weekly and evaluated. The coordinator of the Academy made daily formal and informal visits to the classrooms and every teacher received a formal written evaluation. Teachers with expertise in reading were the trainers in the Academy and modeled how the program was to be taught. Specifically, they took the Make a Word program and demonstrated with the teacher participants how it was used and practiced step by step how to teach it to their
students. Teachers in the Academy were given an opportunity to look through catalogs and purchase materials that they thought would assist them during learning center time. These materials had to be approved by the supervisor of Language Arts and had to have a direct purpose to improving reading and/or writing achievement. Teachers were also given time to collaborate together and plan lessons for their same grade level students. By working as a collegial team, teachers were able to pool their strategies in order to provide effective instruction.

Research Question One

What were the pedagogical strategies and materials that led to the success of the program? Since the training of the teachers was such an important component of the Academy, this study used a focus group to determine whether or not the teacher was a factor in student success of the program. Students in the Academy learned a specific set of reading strategies from their teachers. These strategies were taught to the teachers during a training session before the Academy began. Teachers not teaching in the Academy were not exposed to these strategies. They continued to use the methods they were using in their classrooms that involved whole group teaching and little one on one teaching with students. They also were not using the Make a Word or McCracken programs.

Therefore, in order to answer this question, a focus group was held with teachers in the Academy and those who were not trained for the Academy. The purpose was to learn whether the teacher training in the Academy made a significant difference in the strategies used in comparison to the teachers who were not trained for the Academy. Some findings could be made concerning the teacher as a factor in the success of the
Academy based on responses from questions from the participants in both groups. Additionally, the researcher saw the importance of comparing the methods used in the Academy to the methods that were used by teachers who were not in the Academy. Methods used in teaching reading are a significant factor in obtaining achievement in student's reading scores.

Description of the Focus Group

The focus group participants were eight teachers, four who taught in the Academy and four who did not teach in the Academy. The focus group was conducted on May 14, 2003, 2 years after the Academy that was the subject of this study. The teachers were taken to dinner at the Forsgate Country Club in Monroe Township, New Jersey, Mercer County. They were seated at a large oval table with the researcher seated at one end. Teachers wrote answers to some of the questions and the interviewing session was tape-recorded and carefully analyzed at a later date. The participants enjoyed the focus group atmosphere and stated they felt like professionals and were pleased to be a part of the study. The group discussion was highly informative and interactive, and all participants were actively engaged in the discussion. The group was polite and provided the researcher with a tremendous amount of descriptive information and insight about their feelings regarding each of the questions asked.

The teachers who taught in the academy were all Caucasian, taught at various schools in the district, and had the following number of years experience: 9, 19, 28, and 34 years. The teachers who did not teach in the Academy were also Caucasian, taught at various schools in the district of the Academy, and had the following number of years experience: 3, 16, 17, and 20 years.
Focus Group Responses

Based on discussions in the focus group, teachers who applied to the Academy did so for many reasons. Some of the group members commented that they applied to the Academy because they enjoyed the collegiality and liked working through the summer. Most of the group said the money was an incentive for various reasons such as helping their own children’s college fund. Mostly all the participants felt strongly about the learning component of the Academy. They liked keeping up-to-date on the latest strategies and techniques, and they enjoyed the opportunity of perfecting these strategies for use during the school year. Two members of the group said they particularly enjoyed working in a small class environment, and all members of the group said they enjoyed working with the students and seeing the progress that was made.

All members of the Academy group emphasized that they brought their strength of patience and the knowledge of the curriculum to the Academy. They especially emphasized their knowledge of the district portfolio system and how they knew all the assessment pieces to evaluate each student’s progress daily. A participant also said she was “flexible and willing to try new things” and another group member said she “enjoys the challenging children and encouraged them to read and work to their fullest potential.”

When discussing the training program of the Academy, the questions provoked many positive responses from the participants. They elaborated to explain the program training and that all the teachers received the same 3-day training and learned the same skills. The participants praised the consistent follow through for teachers. One participant pointed out that “teachers with experience led the workshop to train the Academy teachers and taught them how to utilize specific strategies.” Another key point was that the portfolio
were made accessible for students in the Academy. "We were able to continue the portfolio with the students and see progress." Other positive comments raised by the participants included, "We read educational articles," "We collaborated with other teachers," "We liked viewing new materials," "We learned new techniques that will help children improve," "Time was allowed to organize the classroom," "We were able to practice the skills presented," "We were able to bring back techniques learned in the Academy to the classroom."

The teachers in the Academy felt prepared to better teach their students how to read after the training because of the variety of strategies and techniques they learned. Most of the teachers responded that they "learned how to break up the morning into blocks of time" and that the Academy "provided the teachers with a sample schedule which was priceless." One teacher said it was helpful to learn "How to organize the classroom because small group setting allowed for success." The teachers were unanimous that the Academy was a learning ground and concepts were then incorporated into the classrooms around the district during the school year. It was a great place to try new things and to use the techniques that were required during the school year such as conducting and scoring the running record. Teachers felt strongly that the skills they used in the program were highly effective, such as making connections through reading, testing basic sight words, and learning more about the portfolio. One of the most emphatic points made over and over was that the, "Small-group environment led to success, students received intense individual instruction, reinforcement was given in deficient areas, students thrived on on-to-one instruction, specifically, 15-20 minutes
daily, wanting to please, and that the program was structured to student's individual needs."

Similar responses were given by the teachers when they were asked to discuss the most important component of the training that they received from the Academy. Teachers felt they were able to fine tune services provided for each individual student and that talking/discussing/borrowing ideas from and with peers was very helpful. Teachers were divided into groups and were given time to discuss ideas, as well as share successes and failures. One teacher commented that meetings throughout the Academy "were wonderful in that we were kept on track."

Teachers stated that they were given a forum to talk about difficulties brainstorm solutions, and that they were able to "share with colleagues new ways to help our students learn how to read better." The teachers also felt it was important to be able to bring back the techniques learned in the Academy and use them in the classroom. Finally, all the teachers discussed the fact that they gained a better understanding of using the portfolio.

The training was 3 days and the Supervisor of Language Arts, the Principal of the Academy, and several teachers led it. There were 24 teachers involved in the training. Teachers stated that they were given an opportunity to practice what they learned and gave some examples. One example was that teachers were given samples of children's work and asked to score them. Results were discussed. Text to self, text-to-text, text to world strategies were taught and the vowel (syllable) pattern chart strategy was taught and practiced. Another important component to teachers was that time was given to set up the classroom.
These responses were limited. The training could have been improved by having
more time to get together with teachers from the same grade level in order to plan
together. One teacher stated, "My teaching was with the primary grades. I would have
liked to learn additional strategies for fourth and fifth grades."

The teachers stated that they felt more confident about teaching reading. "The
Academy took a lot of the guess work out of teaching reading since we were given
specific strategies that work." One-on-one instruction was important because it enabled
the students to be assessed each day. "Definitely, I really think that spending the 15
minutes each day, coaching the individual student to use the strategies helped to make
that student a good reader and very successful. The students now know what to do when
they come across a problem in reading."

Students were assessed using portfolios. IRA's were used and these were
"fabulous" according to the upper grade teachers. "I measured their success by their
portfolio scores in each category, that is running record, sight word, etc." One teacher
stated she also used teacher observation. Another stated she measured their success by
listening to and observing them read and applying what they learned in their writings,
making various reading charts with the students (Vowel syllable pattern chart. What does
a good reader do, How to choose a just right book.) Watching them share and discuss
their reading books with their reading partners during partnership reading was another
way to measure their success. Through continuous assessment students were able to
advance in levels, a measurement of success. This success was extremely motivational
and a factor in their progress.
Records were kept in a variety of ways. Notes were taken on each student. Individualized programs were set up for each child. "I also made daily notes on each session." Keeping a portfolio indicates and supports progress. Recording ongoing running records and making anecdotal notes during individual conference times are other ways of keeping records of student success.

When asked if the teachers could teach other teachers how to teach reading from their training the teachers comments were, "Yes, I could probably teach other teachers how to teach reading from my training." "Yes, I could transfer what I learned in the Academy to other teachers and to my classroom, which I have already done." "Yes, the training in the strategies can be easily implemented in the classroom." Other statements made by the teachers included that at the end of each summer, the teachers got together with colleagues and showed them the new things they learned and used in the Academy.

The teachers emphasized that they have had great success using strategies, materials, and techniques in their classrooms. They also informed the researcher that their teams come to them to find out more information about what they have learned in the Academy.

Teachers stated that they made changes and adaptation to our own programs.

Teachers who Did Not Teach in the Academy

A discussion was held on how students were taught to read in 1999 and 2000. The teachers discussed the method of teaching reading through the use of core books. They explained that the core books were not on the student's reading level, so they read the book to the whole class. They used these books for skills and units and did reading and writing activities related to the core books. They also had a list of spelling words every week that came from those books or content areas. A mixture of whole group instruction and small groups was used. They explained they had spelling tests each Friday that
related to either vowel sounds or special content words. A teacher said, "I taught reading through whole group shared reading lessons, where I would introduce a concept to the whole class and model it. Then I would teach small groups which were grouped by ability in guided reading groups. During guided reading, students were able to read on their own level and work on strategies." Teachers said they taught students phonics as well as comprehension skills. Other comments made by teachers included that some learning centers were used. Most students came to second grade with sight word recognition and the ability to put words together to make sentences. Finally, teachers used many strategies to help students figure out unfamiliar words, what a student was saying, what words rhymed and soon there were guided reading groups, along with whole class stories and extra reading time with children who needed help with a particular skill, such as phonics.

A variety of methods were used to teach reading.

“We used big books to teach skills. We would do comprehension sheets.

We had DEAR (Drop Everything And Read) time for independent reading whenever we could fit it in. McCracken was used to teach sounds and vowel patterns. I spent a lot of time teaching specific reading strategies and students practiced using reading strategies like the cloze technique in shared reading books and guided reading groups and the "Guess the covered Word" game using the poetry on overhead. Students did a lot of work with word families and word chunks. These became very familiar to the students. The weeks spelling words concentrated on a phonics skill. We were using portfolio assessment including the running records; DSA, retellings, writing samples and I believe most of the same elements as we have now. I also used related literature to support and supplement.
Students read and then we discussed what happened in that part of the story.

Students read a wide variety of books—fairytales, fiction, non-fiction—all to allow them to learn about many things. I tried to weave in skills like cause/effect, predicting, comparing/contrasting, and characters.

Teachers had different viewpoints on whether their students learned how to read effectively. "I feel they learned to read effectively, but I feel the strategies used now make it easier and they stay with the children. They are more eager to read because it comes easier." I knew this because I saw progress on the portfolio as well as just meeting with them and having them read. However, I still did not see the eagerness and interest that I do now." Another teacher stated, "Yes, I know they were reading effectively because they completed running records, with me, and read accurately and fluently and they were able to answer several comprehension questions that also questioned their ability to draw inferences from what they read. They were also able to complete written retells of stories they had read." An experienced teacher explained, "Some did, some didn't. I'm basing that on not only their portfolio scores but also my interaction with my children."

Students' ability in reading was assessed in a variety of ways. "I met with them individually as often as possible, I used a clipboard with note cards so I could jot notes about what they needed help with, I used the CTBS scores from 1st grade, student discussion, I used portfolio assessment. Reading one on one with students, phonics worksheets, and homework." One teacher stated that, "Students were assessed through observation, running records, informal discussion, written retells, and McCracken slate and, assessment answers to comprehension questions."
There was much enthusiasm from the participants when asked if the strategies they learned during the past 2 years are more effective than what they used in 1999. They responded with the following comments: "Without a doubt! The children love this! They are so eager to read every day."

A tenured teacher was pleased that her students were able to use words like conflict resolution, strategy and italics. She commented,

"It is so wonderful to be a part of this! Yes, reading strategies that were new. We're 'making connections.' Students now can connect to literature in different ways. We now use the word wall, which introduces children to several sight words and the activities we do with these words review phonics and word skills. Yes! Students seem to derive more from the recent additional strategies we've learned to incorporate. They love to learn about the characters in a given story, what happens to them. They seem to remember more details. They look at reading as enjoyable."

The group of teachers agreed they are doing a lot more book talks and more independent reading today than they did in the previous years. They discussed that the word wall has become a much more important part of their instruction and that the children use it everyday. Many of the teachers said that students learn their reading strategies faster and sooner in the year and are able to move more quickly though the guided reading levels. Two of the teachers reported that they have students doing a lot more independent reading and a lot more "book talk." One teacher said, "I do very little whole group instruction. Many times a skill is taught as it comes up naturally."
teachers talked about doing word work such as the word wall, McCracken program, and Making Words instead of spelling words. They liked the fact that they could work with students individually and that students enjoy books on a more personal basis. One comment was, "Our classroom library is the busiest place in my classroom." The teachers also discussed that they now use mini lessons leading up to the independent reading to teach strategies, they teach text to text, text to self, and text to world connections, and that there is more concentration on independent reading. Students record their findings from mini-lessons by using stop and jot. Teachers noted that they use the core book only if it can be used as a short-shared reading lesson.

Summary of Focus Group

According to Snow et al. (1998), adequate initial reading instruction requires that children use reading to obtain meaning from print, have frequent and intensive opportunities to read, are exposed to frequent, regular spelling-sound relationships, and understand the structure of spoken words. The Academy provides children with daily frequent and intensive opportunities to read and through the daily one to one instruction children are learning how to obtain meaning from print. During the phonemic awareness part of the session, children are learning regular spelling-sound relationships. Therefore, the Academy is providing students with the required elements of a research based reading program.

In a study conducted by the Ohio State group (Pinnell, Lyons, Deford, Bryk, & Seltzer, 1991), it was determined that the students who had teachers who received more extensive training out-performed students who had teachers in the 2-week program. In discussing training with the teachers in the focus group, they emphasized the importance
of learning the strategies to teach their students before the Academy began. They also discussed the importance of having a schedule to follow with a break down of what area of reading to teach during each part of the session. The Academy demonstrated these characteristics by providing a schedule for teachers to use that include specific techniques to use during each part of the session. Additionally, in the Academy students were exposed to intense instruction in reading through the use of the McCracken program, Make a Word to address phonemic awareness and phonics skills and then teachers listen to each student read as they guide them to use specific reading strategies to reinforce reading skills.

Lyon (1997) noted the importance of teachers being thoroughly trained to assess and identify problem readers at early ages. The Academy took pride in training teachers to use a variety of assessments to identify the needs of the students and then provides the programs and materials to remediate the student. The training was brief but intense for teachers with other teachers modeling the techniques that are used for the students.

Research Question Two

What was the impact of an intensive summer reading program on the reading comprehension performance of second grade students who were reading below grade level?

Short and Long Term Effects of the Academy on Reading

In order to determine the short-term effects of the academy, that is the effect of the Academy on participants reading immediately after the Academy, a paired sample t-test was conducted on pre and post scores for all students attending the academy. Two scores were considered: Phonemic Awareness and Sight Word List mastery. These two measures were assumed to indicate a student’s progress in reading. The phonemic
awareness and sight word tests were administered to the Academy participants during the Academy.

Data collected was analyzed using the SPSS Program. To determine whether or not the Academy made a short-term difference, a paired sample t-test in statistics was conducted based on the third grade CTBS reading level scores of students and the fourth grade ESQA reading scores of Academy participants and non-participants. Data by grade level was disaggregated to determine whether there were any statistical differences between grade levels.

*Short Term Effects of the Academy on Reading*

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonemic Awareness and Sight Word Paired Samples Statistics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phonemic Awareness Pre Academy</td>
<td>47.6452</td>
<td>23</td>
<td>3.1653</td>
<td>.6488</td>
</tr>
<tr>
<td>Phonemic Awareness Post Academy</td>
<td>53.0670</td>
<td>23</td>
<td>1.6213</td>
<td>.3361</td>
</tr>
<tr>
<td>Pair 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sight word list Pre Academy</td>
<td>99.3043</td>
<td>23</td>
<td>1.8448</td>
<td>.3647</td>
</tr>
<tr>
<td>Sight word list Post Academy</td>
<td>100.0000</td>
<td>23</td>
<td>1.0000</td>
<td>.0000</td>
</tr>
</tbody>
</table>

Table 1 demonstrates that the mean Phonemic Awareness Pre Academy score is 47.6 and the Post score is 53.1. The mean Sight Word List Pre Academy score is 99.3 and the Post score is 100. Students entering the Academy in second grade had, on average, mastered 99% of these words leaving little room to demonstrate growth.
Table 2

**Paired T Test for Phonemic Awareness and Sight Words**

<table>
<thead>
<tr>
<th>Pair</th>
<th>Measure</th>
<th>Mean Difference</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phonemic awareness Pre Academy - Phonemic Awareness Post Academy</td>
<td>-5.1217</td>
<td>2.5726</td>
<td>.5687</td>
<td>-10.289</td>
<td>.000</td>
</tr>
<tr>
<td>2</td>
<td>Sight word list Pre Academy - Sight word list Post Academy</td>
<td>-5667</td>
<td>1.6446</td>
<td>.3047</td>
<td>-1.801</td>
<td>.084</td>
</tr>
</tbody>
</table>

Table 2 indicates that the t-value for the paired t-test on Phonemic Awareness Pre and Post scores is 10.3. The mean difference is significant at p=.000 level. This demonstrates that the Academy had a positive significant effect on grade two students' Phonemic Awareness, which is one indicator of reading success. The mean difference between Pre and Post Academy Phonemic Awareness scores is 5.5 points. 

Table 2 illustrates that the t-value for the paired t-test on Sight Word List Pre and Post scores is 1.8. The mean difference is not significant at the .05 level. There are only 108 words on the grade two Sight Word List. In Table 3 the frequency of scores on the Sight Word List Pre Academy is indicated. Nineteen students had already mastered all 100 sight words. In Table 4, all Academy students had mastered all 100 sight words. Students entering the Academy in second grade had, on average, mastered 99% of these words leaving little room to demonstrate growth.

In order to determine whether there was a difference in Academy students' achievement according to gender, independent t tests were conducted.
Table 3

Sight Word List Frequency Table (Pre Academy)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>92.00</td>
</tr>
<tr>
<td>97.00</td>
<td>2</td>
</tr>
<tr>
<td>98.00</td>
<td>1</td>
</tr>
<tr>
<td>100.00</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
</tr>
</tbody>
</table>

Table 4

Sight Word List Frequency Table (Post Academy)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5

Phonemic Awareness and Sight Words by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sep. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonemic Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>52.8462</td>
<td>1.7723</td>
<td>.4916</td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>53.4000</td>
<td>1.4286</td>
<td>.4522</td>
</tr>
<tr>
<td>Sight word list Post Academy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>100.0000</td>
<td>.0000</td>
<td>.0000</td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>100.0000</td>
<td>.0000</td>
<td>.0000</td>
</tr>
</tbody>
</table>

*P cannot be computed because the standard deviations of both groups are 0.

According to the data in Table 5 the mean scores for Phonemic Awareness Post tests for female and male grade two students are 52.8 and 53.4 respectively. Since the standard deviation of Sight Word List Post scores for female and male students was zero, a t-Test could not be conducted. The standard deviation was zero due to all students having the same score on Sight Word List since they had all mastered all 100 sight words.
Table 6

T Test of Phonemic Awareness by Gender (Post Academy)

<table>
<thead>
<tr>
<th>Phonemic Awareness by Gender</th>
<th>F</th>
<th>Sig</th>
<th>t</th>
<th>df</th>
<th>Sig (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Academy</td>
<td>.292</td>
<td>.602</td>
<td>.829</td>
<td>21</td>
<td>.429</td>
<td>-5.538</td>
<td>.674</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The *t*-value for the *t*-test on Phonemic Awareness by Gender is .806. (see Table 6). The mean difference in Phonemic Awareness Post scores for female and male students was not significant. Hence, there is no difference between female and male students on Phonemic Awareness.

Long Term Effects of the Academy

In order to determine the long term effects of the Academy longitudinal data were examined for those students attending the academy.

In order to answer the question, whether an intensive literacy program provided sustained reading comprehension improvement in second grade elementary school students reading comprehension who were instructed by teachers trained in specific comprehension strategies as compared to second grade students who did not attend the intensive literacy program and who did not receive the benefit of instruction from teachers who were trained in specific literacy strategies. Comprehensive Test of Basic Skills (CTBS) reading test scores were collected and studied for 2 years; 1999, 2000. The Elementary School Proficiency Assessment (ESPA) scores were used for 2001 since...
these students were in grade four in 2001 and the state-district mandated ESPA is administered in that grade.

For the purpose of this study there are three groups, students who attended the Academy (Academy), students who were accepted into the Academy but chose not to attend (No Academy), and a Random group (Random). There were 24-second grade students who attended the Academy in 1999 and were studied for the year 2000 and 2001. In addition, 10-second grade students who were accepted into the Academy in 1999, but did not attend, were studied for the year 2000 and 2001. The random group is 30 students randomly selected that were not recommended for the Academy, which basically are proficient readers. Analysis of variances was conducted on standardized reading tests in grade 3 and grade 4 for the three groups (Academy students, students not attending the Academy but were recommended, and student not needing reading remediation).

All grade two students in the district were assessed using the CTBS Reading assessment. In order to compare the Academy students, the No Academy students and the Random Control students prior to the Academy, analysis of variance was conducted.

Table 7 indicates that the mean scores for students attending the Academy is 46.4; students recommended but did not attend (No Academy) is 39.6; and those students not needing reading remediation (Random Control) is 72.1.

According to the data in Table 8 the $F$ value of 22.194 is significant at the $p = .000$ level. This implies that there is a significant difference between two or more of the groups at the end of second grade.
Table 7

**Grade 2 CTBS Reading 1999 Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Academy</td>
<td>24</td>
<td>46.3750</td>
<td>11.3651</td>
</tr>
<tr>
<td>No Academy</td>
<td>9</td>
<td>39.5506</td>
<td>9.4756</td>
</tr>
<tr>
<td>Random Control</td>
<td>30</td>
<td>72.1000</td>
<td>19.5200</td>
</tr>
</tbody>
</table>

Table 8

**ANOVA Grade 2 CTBS Reading 1999**

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>12261.770</td>
<td>2</td>
<td>6130.885</td>
<td>32.194</td>
<td>.002</td>
</tr>
<tr>
<td>Within Group</td>
<td>16574.547</td>
<td>60</td>
<td>276.242</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28836.317</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In order to determine which groups are significantly different from one another, a post hoc comparison was conducted. Table 9 indicates that the mean difference between the Random Control mean and the In Academy mean which was 25.7 points was significant at the p = .000 level. The mean difference between the Random Control mean and the No Academy mean was 32.5 points was significant at the p = .000 level. This means that those students not recommended for the Academy (Random Control) were significantly better readers than those students that were recommended for the Academy. The difference between the Random Control Group and the No Academy Group was greater about 77 points than between the Random Control and the In Academy. There was no significant difference between those students that later attended the Academy (In Academy) and those students that were recommended but did not attend (No Academy).
Table 9

Post Hoc of Grade 2 CTBS Reading by Participation

<table>
<thead>
<tr>
<th>(I) Academy Participation</th>
<th>(II) Academy Participation</th>
<th>Mean Difference (I-II)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Academy</td>
<td>No Academy</td>
<td>4.8194</td>
<td>6.4964</td>
<td>.549</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>-25.7250*</td>
<td>4.5517</td>
<td>.000</td>
</tr>
<tr>
<td>No Academy</td>
<td>In Academy</td>
<td>-4.8194</td>
<td>6.4964</td>
<td>.549</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>-32.5444*</td>
<td>6.3168</td>
<td>.000</td>
</tr>
<tr>
<td>Random Control</td>
<td>In Academy</td>
<td>25.7250*</td>
<td>4.5517</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No Academy</td>
<td>32.5444*</td>
<td>6.3168</td>
<td>.000</td>
</tr>
</tbody>
</table>

* The mean difference is significant at the .05 level.

Post Hoc Analysis of Grade 2 CTBS Reading by Participation

Dependent Variable: Grade 2 CTBS Reading 1999

Tekey HSD

The mean scores for the third grade CTBS Reading and fourth-grade ESPA are presented in Table 10. The mean score on the CTBS Reading test for those students attending the Academy is 54.7. The mean score on the CTBS Reading test for those students not attending the Academy is 55.4. The mean score on the CTBS Reading test for those students not recommended for the Academy is 71.8.

The mean scores for the fourth-grade ESPA Language are presented in Table 10. The mean score on the ESPA Language test for those students attending the Academy is 223.9. The mean score on the ESPA Language test for those students not attending the
Academy is 218.9. The mean score on the ESPA Language test for those students not recommended for the Academy is 246.7.

Table 10:

Descriptive Statistics for Grade 3 CTBS Reading and Grade 4 ESPA Language

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Sig. Corr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3 CTBS Reading</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In Academy</td>
<td>21</td>
<td>54.1143</td>
<td>11.7139</td>
<td>2.5962</td>
</tr>
<tr>
<td>No Academy</td>
<td>8</td>
<td>20.3750</td>
<td>9.8552</td>
<td>3.493</td>
</tr>
<tr>
<td>Random Control</td>
<td>30</td>
<td>71.7657</td>
<td>18.7877</td>
<td>2.937</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>63.4746</td>
<td>16.1596</td>
<td>2.1156</td>
</tr>
<tr>
<td>ESPA Language 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In Academy</td>
<td>20</td>
<td>223.9060</td>
<td>17.7435</td>
<td>3.9678</td>
</tr>
<tr>
<td>No Academy</td>
<td>8</td>
<td>218.8750</td>
<td>17.1334</td>
<td>6.0576</td>
</tr>
<tr>
<td>Random Control</td>
<td>30</td>
<td>246.7333</td>
<td>14.9707</td>
<td>2.7347</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>235.0172</td>
<td>20.1612</td>
<td>2.4499</td>
</tr>
</tbody>
</table>

Table 11

ANOVA for Grade 3 CTBS Reading and Grade 4 ESPA Language

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3 CTBS Reading</td>
<td>4109.184</td>
<td>2</td>
<td>2099.592</td>
<td>10.576</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Between Groups</td>
<td>4109.184</td>
<td>2</td>
<td>2099.592</td>
<td>10.576</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>11117.527</td>
<td>46</td>
<td>244.527</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>15316.712</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESPA Language 2001</td>
<td>8079.641</td>
<td>2</td>
<td>4337.322</td>
<td>16.435</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Between Groups</td>
<td>8079.641</td>
<td>2</td>
<td>4337.322</td>
<td>16.435</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>14540.542</td>
<td>55</td>
<td>265.373</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23514.184</td>
<td>57</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 11 illustrates that the F-value for the analysis of variance is 10.6 for the CTBS Reading test. This difference in means is significant at p=.000 level. In order to determine which groups had significantly different mean scores, Post Hoc analysis was conducted using Tukey. Table 11 further illustrates that the F-value for the analysis of variance is 16.4 for the ESPA. This difference in means is significant at the p=.000 level (p < .001). In order to determine which groups had significantly different mean scores, Post Hoc analysis was conducted using Tukey.
### Table 12

#### Post Hoc Analysis Grade 3 CTBS Reading and Grade 4 ESPA Language by Participation

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(f) Academy Participation</th>
<th>(f) Academy Participation</th>
<th>Mean Difference (D)</th>
<th>Std. Error</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade 3 CTBS Reading 2000</strong></td>
<td>In Academy</td>
<td>No Academy</td>
<td>-9.667*</td>
<td>5.8540</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>No Academy</td>
<td>-17.052*</td>
<td>4.0893</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No Academy</td>
<td>In Academy</td>
<td>-9.897</td>
<td>5.8546</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>In Academy</td>
<td>-15.391*</td>
<td>5.8565</td>
<td>.014</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>No Academy</td>
<td>17.052*</td>
<td>4.0069</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No Academy</td>
<td>Random Control</td>
<td>16.391*</td>
<td>5.6066</td>
<td>.014</td>
</tr>
<tr>
<td><strong>ESPA Language 2001</strong></td>
<td>In Academy</td>
<td>No Academy</td>
<td>5.0550</td>
<td>6.9019</td>
<td>.742</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>No Academy</td>
<td>-22.833*</td>
<td>4.6937</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No Academy</td>
<td>In Academy</td>
<td>-6.0550</td>
<td>6.9019</td>
<td>.742</td>
</tr>
<tr>
<td></td>
<td>Random Control</td>
<td>In Academy</td>
<td>-27.8563*</td>
<td>6.4699</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>No Academy</td>
<td>Random Control</td>
<td>22.833*</td>
<td>4.9437</td>
<td>.000</td>
</tr>
</tbody>
</table>

*The mean difference is significant at the .05 level.

Table 12 demonstrates that the CTBS Reading mean difference between students that were not recommended for the Academy (Random Control) was 17.1 points higher than students that attended the Academy. This difference was significant at the .05 level. The CTBS Reading mean difference between students that were not recommended for the Academy (Random Control) was 16.4 points higher than students that were recommended for the Academy but did not attend (No Academy). This difference was significant at the .05 level. There was no significant difference between those students that attended the Academy and those students that were recommended to attend but did not (No Academy). Since the Academy is only 4 weeks long, the amount of remediation for those attending seems to have little effect after 1 year. Those students that were not recommended for the Academy in 1999 were still significantly better readers than those students that were recommended to attend the Academy.
Table 12 demonstrates that the ESPA Language mean difference between students that were not recommended for the Academy (Random Control) was 22.8 points higher than students that attended the Academy. This difference was significant at the $p = .000$ level. The ESPA Language mean difference between students that were not recommended for the Academy (Random Control) was 27.9 points higher than students that were recommended for the Academy but did not attend (No Academy). This difference was significant at the $p = .000$. There was no significant difference between those students that attended the Academy and those students that were recommended to attend but did not (No Academy). While there was no significant difference in the mean ESPA Language scores for those students that attended the Academy and those students that did not, the mean ESPA Language score was higher for those students that attended.

Those students that were not recommended for the Academy in 1999 were still significantly better readers than those students that were recommended to attend the Academy.

*Analysis of Reading Scores for Academy, Non Academy, and Random Control Students*

**Table 13**

*Grade 2 and Grade 3 CTBS Reading Scores for Academy Students*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Par 1</td>
<td>Grade 2 CTBS Reading 1999</td>
<td>46.0476</td>
<td>21</td>
<td>13.9803</td>
</tr>
<tr>
<td></td>
<td>Grade 3 CTBS Reading 2000</td>
<td>54.7143</td>
<td>21</td>
<td>11.7139</td>
</tr>
</tbody>
</table>

* A = Academy Participation; NA = Academy

Table 13 shows that the mean for grade 2 CTBS Reading 1999 was 46.0 and the mean for the grade 3 CTBS Reading 2000 was 54.7. The mean difference for the reading scores was 8.7. This shows that the reading scores improved for the students who attended the Academy.
Table 14

<table>
<thead>
<tr>
<th>Pair</th>
<th>Grade 2 CTBS Reading 1999 - Grade 3 CTBS Reading 2000</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td>-8.6607</td>
<td>10.3907</td>
<td>2.2692</td>
<td>-3.819</td>
<td>30</td>
<td>.001</td>
</tr>
</tbody>
</table>

* Academy Participation = In Academy

Table 14 shows that the mean grade 2 and grade 3 Reading score for Academy students was 8.7. The mean was significant at the .001 level.

Table 15

<table>
<thead>
<tr>
<th>Pair</th>
<th>Grade 2 CTBS Reading 1999</th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>Grade 2 CTBS Reading 1999</td>
<td>38.8750</td>
<td>n</td>
<td>10.3254</td>
<td>3.4520</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3 CTBS Reading 2000</td>
<td>55.3750</td>
<td>8</td>
<td>9.6522</td>
<td>3.4843</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Academy Participation = No Academy

Table 15 shows that the mean for grade 2 CTBS Reading 1999 was 38.8 and the mean for the grade 3 CTBS Reading 2000 was 55.4. The mean difference for the reading Scores was 16.6. This shows that the reading scores improved for the students who were non Academy students.

Table 16

<table>
<thead>
<tr>
<th>Pair</th>
<th>Grade 2 CTBS Reading 1999 - Grade 3 CTBS Reading 2000</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td>-11.5000</td>
<td>9.2044</td>
<td>3.2056</td>
<td>-3.016</td>
<td>7</td>
<td>.02</td>
</tr>
</tbody>
</table>

* Academy Participation = In Academy
Table 16 shows that the mean grade 2 and grade 3 Reading score for Non Academy students was 16.5. The mean was significant at the .002 level. Both groups showed improvement from second to third grade. This would suggest that the district’s instructional program at third grade might be very strong. As stated in the findings from the focus group, teachers in the regular education program were beginning to use the strategies during the school year that were used in the Academy creating a spillover effect.

Table 17

<table>
<thead>
<tr>
<th>Grade 2 and Grade 3 CTBS Reading Scores for Random Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Pair 1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

* Academy Participation = Random Control

Table 17 shows that the mean for grade 2 CTBS Reading 1999 was 72.1 and the mean for the grade 3 CTBS Reading 2000 was 71.8. The mean difference for the reading scores was -0.3. This shows that the reading scores did not improve for the random control students.

Table 18

<table>
<thead>
<tr>
<th>T Test of CTBS Reading for Random Control Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Pair 1</td>
</tr>
</tbody>
</table>

* Academy Participation = Random Control
Table 18 shows that the mean grade 2 and grade 3 Reading score for random control students was .3333. The mean was not significant. Students who attended the Academy did better in reading than those students who were in the random control group.

Table 19

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>% Proficient or Advanced Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy (N=20)</td>
<td>17</td>
<td>85%</td>
</tr>
<tr>
<td>Non-Academy (N=88)</td>
<td>7</td>
<td>97.3%</td>
</tr>
<tr>
<td>Total Grade 4 Population</td>
<td>717</td>
<td>93%</td>
</tr>
</tbody>
</table>

Table 19 demonstrates that 85% of the Academy second grade students passed the state mandated ESPA in fourth grade, as did 87.5% of the Non-Academy group, and 93% of the Random group.

Analysis of Gender Differences

In order to determine whether there was a difference by gender for each of the three groups (In Academy, No Academy, and Random Control) independent samples $t$-tests were conducted.

Academy Students

Table 20 illustrates that the mean scores for females were comparable to male students. The female mean scores on the Grade 2 Reading, Grade 3 Reading and ESPA Language were 44.2, 54.5, and 222.3 respectively. The male mean scores were 49.0, 54.9, and 225.9 on the same assessments.

Table 21 demonstrates that the $t$-value for the Grade 2 CTBS Reading was -.818 and was not significant at the $p = .05$ level. The $t$-value for the Grade 3 CTBS Reading was .068 and was not significant at the $p = .05$ level. The $t$-value for the ESPA Language was .444 and was not significant at the $p = .05$ level. This demonstrates that
there was no significant difference between male and female students on these reading assessments.

Table 20

**Descriptive Statistics by Gender for Academy Students**

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2 CTBS Reading 1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>13</td>
<td>44.1536</td>
<td>10.0107</td>
<td>2.9151</td>
</tr>
<tr>
<td>Male</td>
<td>11</td>
<td>49.0000</td>
<td>18.1052</td>
<td>5.4589</td>
</tr>
<tr>
<td>Grade 3 CTBS Reading 2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>54.5455</td>
<td>9.1034</td>
<td>2.7648</td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>54.0000</td>
<td>14.8865</td>
<td>4.6127</td>
</tr>
<tr>
<td>ESPA Language 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>222.2277</td>
<td>3.1113</td>
<td>8.6068</td>
</tr>
<tr>
<td>Male</td>
<td>9</td>
<td>258.8889</td>
<td>18.1552</td>
<td>6.0517</td>
</tr>
</tbody>
</table>

* Academy Participation * A Academy Participation

Table 21

**Independent T Test by Gender for Academy Students**

<table>
<thead>
<tr>
<th>Gender</th>
<th>F</th>
<th>Sig.</th>
<th>df</th>
<th>T-test for Equality of Means</th>
<th>Mean Difference</th>
<th>Std Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2 CTBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading 1999</td>
<td>Total</td>
<td>.161</td>
<td>.978</td>
<td>-22</td>
<td>.422</td>
<td>-4.6462</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.333</td>
<td>-1.18</td>
<td>22</td>
<td>.422</td>
<td>-4.8462</td>
<td>5.1885</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-783</td>
<td>15.488</td>
<td>.445</td>
<td>-4.8462</td>
<td>5.1885</td>
<td></td>
</tr>
<tr>
<td>Grade 3 CTBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.547</td>
<td>-1.668</td>
<td>19</td>
<td>.947</td>
<td>-3.545</td>
<td>5.3675</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-336</td>
<td>14.629</td>
<td>.948</td>
<td>-3.545</td>
<td>5.3675</td>
<td></td>
</tr>
<tr>
<td>ESPA Language 2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>.116</td>
<td>.735</td>
<td>-18</td>
<td>.563</td>
<td>-3.6162</td>
<td>8.1492</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.444</td>
<td>17.206</td>
<td>.663</td>
<td>-3.6162</td>
<td>8.1513</td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-444</td>
<td>17.206</td>
<td>.663</td>
<td>-3.6162</td>
<td>8.1513</td>
<td></td>
</tr>
</tbody>
</table>

* Academy Participation * A Academy Participation

**Non Academy Students**

The mean scores for females were comparable to male students. The female mean
scores on the Grade 2 Reading, Grade 3 Reading and ESPA Language were 48.0, 56.0, and 217.3 respectively. The male mean scores were 39.2, 55.0, and 219.8 on the same assessments.

Table 22

Descriptive Statistics for Non Academy Students by Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Grade 2 CTBS Reading</th>
<th>Gender</th>
<th>Grade 3 CTBS Reading</th>
<th>Gender</th>
<th>ESPA Language</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Std. Deviation</td>
<td>Std. Error Mean</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>40.000</td>
<td>11.1054</td>
<td>5.5627</td>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
<td>39.200</td>
<td>10.0698</td>
<td>4.8649</td>
<td>Male</td>
</tr>
</tbody>
</table>

Table 23 demonstrates that the t-value for the Grade 2 CTBS Reading was -.113 and was not significant at the p = .05 level. The t-value for the Grade 3 CTBS Reading was .129 and was not significant at the p = .05 level. The t-value for the ESPA Language was -.183 and was not significant at the p = .05 level. This demonstrates that there was no significant difference between male and female students that did not attend the Academy on these reading assessments.

Random Control Students

Table 24 illustrates that the mean scores for females were comparable to male students. The female mean scores on the Grade 2 Reading, Grade 3 Reading and ESPA Language were 72.6, 74.5, and 246.1 respectively. The male mean scores were 71.6, 68.6, and 247.4 on the same assessments.
### Table 23

**Independent T Test by Gender for Non-Academy Students**

<table>
<thead>
<tr>
<th></th>
<th>Levene's Test for Equality of Variances</th>
<th>t-Test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig</td>
</tr>
<tr>
<td>Grade 2 CTBS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading 1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.213</td>
<td>.586</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.112</td>
<td>.620</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3 CTBS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading 2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.126</td>
<td>4.071</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESPA Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>.187</td>
<td>.660</td>
</tr>
<tr>
<td>assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances</td>
<td>-.196</td>
<td>5.271</td>
</tr>
<tr>
<td>not assumed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Academy Participation = No Academy

### Table 24

**Descriptive Statistics for Random Control Students by Gender**

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2 CTBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading 1999</td>
<td>Female</td>
<td>16</td>
<td>72.5625</td>
<td>10.2390</td>
<td>4.5598</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>14</td>
<td>71.5714</td>
<td>21.5789</td>
<td>5.7872</td>
</tr>
<tr>
<td>Grade 3 CTBS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading 2000</td>
<td>Female</td>
<td>16</td>
<td>74.0000</td>
<td>17.2243</td>
<td>4.3198</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>14</td>
<td>69.5429</td>
<td>15.0270</td>
<td>4.0537</td>
</tr>
<tr>
<td>ESPA Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Female</td>
<td>16</td>
<td>246.1250</td>
<td>17.5563</td>
<td>4.4146</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>14</td>
<td>247.4296</td>
<td>12.8158</td>
<td>3.1568</td>
</tr>
</tbody>
</table>

* Academy Participation = Random Control

Table 25 demonstrates that the t-value for the Grade 2 CTBS Reading was -.136 and was not significant at the p = .05 level. The t-value for the Grade 3 CTBS Reading was .982 and was not significant at the p = .05 level. The t-value for the ESPA Language was -.234 and was not significant at the p = .05 level. This demonstrates that there was no significant difference between female and male students’ scores on grade two CTBS.
reading, grade three CTBS reading, and grade 4 ESPA language that were not recommended to participate in the Academy.

Table 25:

<table>
<thead>
<tr>
<th>Test for Equality of Variances</th>
<th>Levene's Test for Equality of Variances</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
<td>df</td>
<td>Sig (2-tailed)</td>
<td>Mean Difference</td>
</tr>
<tr>
<td>Grade 3 CTBS Reading Pretest</td>
<td>1.026</td>
<td>.227</td>
<td>.136</td>
<td>28</td>
<td>.991</td>
<td>7.2679</td>
</tr>
<tr>
<td></td>
<td>Equal variances assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 3 CTBS Reading Posttest</td>
<td>3.52</td>
<td>.064</td>
<td>.162</td>
<td>28</td>
<td>.334</td>
<td>5.8571</td>
</tr>
<tr>
<td></td>
<td>Equal variances assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESPA Language Readiness 2001</td>
<td>.962</td>
<td>.335</td>
<td>-2.34</td>
<td>29</td>
<td>.017</td>
<td>-1.3036</td>
</tr>
<tr>
<td></td>
<td>Equal variances assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Equal variances not assumed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\* Academy Participation = Random Class

Summary

The Academy did what it was designed to do. It remediated students using an intensive reading program in a 4-week period. However, the amount of remediation seems to have little effect over time after one year. This could be due to the fact that this study was limited to such a small number of students; 24 who went to the Academy and 10 who were accepted into the Academy and chose not to attend. Also, when the students returned to the regular classroom during the school year, they did not have intensive instruction, and therefore could not maintain that improvement. Additionally, they may not have had the same type of instruction as they received from the teachers in
the Academy in which very specific reading strategies were taught during the four weeks of intensive instruction. This is reason in itself for students to lose the remediation they received during the Academy. During the Academy, the students are given at least 20 minutes of intensive instruction. During the school year, this is difficult with large class sizes and one teacher.

There were 11 male and 13 female students in the study and the researcher studied gender to identify the differences in achievement between the groups. Regardless of the strength of the reader for those students who participated in the Academy, there was no significant difference on the standardized tests by gender.

Teacher training was an important factor in the Academy as was noted by the teachers who participated in the focus group. The main components of the teacher training that were significant were being taught a set of specific strategies to use with the students and being provided with a daily schedule. Having the specific programs such as McCracken and Make a Word was important as it addressed a skill the students needed to improve—phonemic awareness. The small class size was also an important factor in the success of the Academy as it provided teachers an opportunity to work one-to-one with students on a daily basis and give them the intense instruction to help them succeed. Intensive instruction appears to be one of the major factors for the success of student achievement in this study.

Finally, this study was conducted on a very small sample because the researcher wanted to establish the base research for the Academy. It may be noted, also, that the Academy was in its experimental stage being its first year. All criteria for the program were done for the first time and now could be looked at and improved to become more effective and provide better significance over the years. Included in the criteria for further
examination are: criteria used for admitting student into the Academy, material and
programs to be used in the Academy, schedule to follow in the Academy, what to include
in teacher training, and how could we improve assessment in the Academy.

Lastly, the null hypothesis is accepted since there is no significant difference
between the groups. The null hypothesis is that there is no statistically significant
difference between (a.) the sustained reading improvement in second grade students who
receive an intensive literacy program by teachers trained in specific comprehensive
teaching strategies and (b) the reading improvement in second grade students who do not
receive an intensive literacy program by teachers who are not trained in specific teaching
strategies.

Future years of the Academy program may prove that more success will prevail
from an intensive program with small student/teacher ratio and with teachers receiving
training of specific reading strategies.
Chapter V

Conclusions and Recommendations

Introduction

There have been years of disagreement, debate, and controversy around the topic of learning to read and the approaches to best teach children to read. At the same time, illiteracy in America has grown, and statistics show the ever-growing need for effective ways to teach children to read.

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001, the most sweeping reform of the Elementary and Secondary Education Act (ESEA) since ESEA was enacted in 1965. No Child Left Behind creates strong standards in each state for what every child should know and learn in reading in grades 3 through 12. Student progress and achievement will be measured for every child, every year. President Bush described reading as "the new civil right," and his education reform plan has placed a high priority on ensuring that every public school student learns to read as the foundation of his or her education.

With all the emphasis on the importance of teaching children to read, this study examined a new summer intervention program, the Academy, which provided an intensive literacy program for children to learn to read during the summer. The Academy was first implemented in July 1999 and was a homegrown, locally developed program that is research based and focuses on intensive instruction in a small group setting. The population of the Academy participants was small. However, the benefit of this study was that it records the beginning statistics of the program and could be used as a foundation for future studies. This was the first year of the Academy and the study focused only on second grade.
students and followed their progress for two years. The study also focused on second grade students who were accepted into the Academy but did not attend so as to compare whether or not the Academy did in fact have an impact on the achievement of the student who did attend the Academy.

When designing the Academy, much deliberation was given to the teaching methods of reading used in the program. Careful consideration was given to include materials that would focus on phonemic awareness, phonics, and oral reading. It was also important that the materials used addressed various learning styles of the students and include some kinesthetic as well as visual and auditory materials. This was accomplished by using Make a Word, McCracken and portions of the Reading Recovery model.

The National Reading Panel (2000) in its April report named proven methods on how students learn to read. The panel concluded that effective reading instruction includes teaching children to break apart and manipulate the sounds in words (phonemic awareness), teaching them that these sounds are represented by letters of the alphabet which can then be blended together to form words (phonics), having them practice what they have learned by reading aloud with guidance and feedback (guided oral reading), and applying reading comprehension strategies to guide and improve reading comprehension.

One of the outcomes of the focus group discussion was that the teacher-training component was extremely important in the Academy. The Academy teachers were trained to teach a specific set of strategies to their students. They were given a schedule to follow and were monitored to ensure that the schedule and program were followed. Only teachers who were interested in helping students achieve success, who had a track record of
providing excellent instruction, and who were dedicated to learning new methods were hired for the academy. Teachers in the focus group expressed their enjoyment with the fact that they were consulted when choosing what materials were utilized during independent work and while working with the students one to one.

According to Snow et al. (1998), excellent instruction is the best intervention for children who demonstrate problems learning to read. Excellent instruction is most effective when teachers are left on their own to obtain specific skills in teaching phonemic awareness, phonics, spelling, reading fluency, and comprehension by seeking out workshops or specialized instructional manuals as opposed to “packaged” reading programs.

It was learned from the focus group that students in the Academy learned a specific set of reading strategies from their teachers. These strategies were taught to the teachers during a training session 3 weeks prior to the commencement of the Academy. The training workshop was offered at the end of June for the teachers who were new to the program. Lyon (1997) had noted that teachers instructing children who display reading difficulties should be well versed in understanding the conditions that must be present for children to develop robust reading skills, and be thoroughly trained to assess and identify problem readers at early ages.

The focus group teachers who taught in the Academy provided very positive feedback regarding the training that they received. A specific consistent schedule was given to the teachers. It was unanimous that the teachers felt it was important to be given a set schedule to follow for the Academy. The provided schedule included programs such as McCracken and Make a Word programs for phonemic awareness, reciprocal teaching for
comprehension skills, one-to-one instruction using the Reading Recovery model of instruction, and meaningful centers to facilitate opportunities for independent work.

There was an open forum that encouraged teachers who were experiencing difficulties with helping students show significant improvement to consult with their colleagues and supervisors to gain strategies and techniques. Many teachers asserted that being encouraged to consult with colleagues and administrators was extremely beneficial. They appreciated that they were given the time and format to have these discussions. The findings of this study are consistent with those of Snow et al. (1998) that ongoing support from colleagues and specialists as well as regular opportunities for self-examination and reflection are critical components of the career long development of excellent teachers.

The teachers felt they were well prepared and trained for the program. They added that the materials for the program were provided and were appropriate for their students. The teachers explained that each child attended for 4 hours every day with no interruptions. Even when students had their snacks, teachers continued to teach individual students and therefore not wasting any teaching time throughout the session. This type of program allowed for intense uninterrupted teaching. It allowed time for teachers to devote at least 20 minutes of individual attention to each student each day. This is a key component of the Academy design. Hunderhan (1990) found that across tutors there was consistency in how they structured the lessons regarding language, materials, and procedural techniques.

The small classes were essential as the small ratio allowed the staff to work individually with each staff every day for a minimum of 20 minutes. According to Clay (1994) early intervention, which includes individually designed and delivered lessons is a solution for minimizing children with difficulties in reading. Teachers also discussed that
they were able to take the strategies learned back to their regular classroom and share with their colleagues. The strategies used in the Academy helped them to teach their students during the regular year to read with success.

In Table 13 and Table 14 it indicates an improvement of reading for the second grade students from grades two to three. This is significant and demonstrates that the Academy is a successful program. Some of these findings are based on a structured research based reading curriculum, the parallel nature of the school year program, the small Academy classes, the 60 hours of intense instruction, the effective training of Academy teachers where they learned specific strategies and received a schedule to follow, the dedication of the teachers, and finally the support of parents and boards/administration.

Other programs have worked with students who have not achieved grade level status but some of these programs, such as Reading Recovery, are very costly. Reading Recovery provides one-to-one tutoring in 30-minute daily sessions to the lowest 10 to 20% of a first grade class. This program limits the number of students that can be addressed. Each Reading Recovery-trained teacher, working a half-day with Reading Recovery, is expected to be able to tutor eight students in one year, though actual figures from the national data set indicate that the average number of students per teacher is much lower—5, 5, or 11 students for a full-time equivalent teacher (Hiebert, 1994).

Teachers are selected for the Academy by their willingness to learn specific strategies and to incorporate them into their repertoire. This is in direct agreement with the findings of Snow et al. (1998) who concludes that a critical element for preventing difficulties in young children is the teacher. The supervisor of language arts selected the teachers for the Academy and the same teachers were rehired during subsequent years for
continuity in the program. Each teacher is trained in the same strategies in order to provide equal instruction to all students attending the program. The initial training was for 3 days and included the modeling of specific strategies that were to be used in the program. These strategies included: running records, reciprocal teaching, reading recovery techniques of using sentences and cutting them and putting them back together, and phonetic strategies.

The way the Academy is designed is more effective for teachers to decide what are the best instructional strategies for students and this is in direct opposite to what many teachers use to teach reading. Snow et al. (1998) discusses that they are tied to "packaged" reading programs, regardless of the quality of the programs or their usefulness for all children because they do not understand the reading process well enough to augment the programs or to select different instructional strategies for different children. A daily schedule was given to teachers. Teachers were given an opportunity to practice the strategies and discuss when they would teach each strategy during the day. Samples of student portfolios were given to teachers and discussions were held on how to score them. The importance of giving each student 15 to 20 minutes of one-to-one intense instruction was discussed and emphasized as being one of the most important components of the daily schedule. Teachers were given time to set up their classrooms and materials as part of the three-day training.

Chall (1967/1983) divided beginning reading into two categories: code-emphasis approaches, which focus on breaking the alphabetic code, which is phonics and meaning-emphasis approaches, which focus on meaningful units rather than the alphabetic principle and letter/sound correspondences. Phonemic awareness skills fall into this category and are an important foundation to the student’s success in reading. Table 2 shows that the
Academy had a positive significant effect on grade two students' Phonemic Awareness, which, as stated by one researcher, Chall (1967/1983), is one indicator of reading success.

Table 5 shows the mean scores for Phonemic Awareness Post tests for female and male grade two students are 52.8 and 53.4 respectively. Table 6 illustrates that the t-value for the t-test en Phonemic Awareness by Gender is .886. The mean difference in Phonemic Awareness Post scores for female and male students was not significant. There is no difference between female and male students on Phonemic Awareness.

This study concurs that the students who were in the Random Control group and that were not recommended for the Academy were significantly better readers than those students that were recommended for the Academy. There was no significant difference between those students that later attended the Academy (In Academy) and those students that were recommended but did not attend (No Academy) as noted in Table 9.

Robert Slavin and his associates at Johns Hopkins University developed Success for All which is a program that provides intensive instruction in language arts, extensive professional development to help teachers succeed with every student, and an active family support program. (Weiler, 1998). Success for All includes a systematic reading program that emphasizes story telling and retelling (STAR), and language development activities such as phonics, vocabulary building, auditory discrimination, and sound blending using cooperative learning techniques in a daily 90-minute reading period. The Academy has some similarities in that it is intensive, however, it is only 3 weeks and Success for All is an 8 week program that is taught throughout the school year. Table 12 shows that the CTBS Reading mean difference between students that were not recommended for the Academy (Random Control) scored 17.3 points higher than students that attended the Academy. The
CTBS Reading mean difference between students that were not recommended for the Academy (Random Control) scored 16.4 points higher than students that were recommended for the Academy but did not attend (No Academy). There was no significant difference between those students that attended the Academy and those students that were recommended to attend but did not (No Academy). Since the Academy is only 4 weeks long, the amount of remediation for those attending seems to have little effect after 1 year. Those students that were not recommended for the Academy in 1999 were still significantly better readers than those students that were recommended to attend the Academy.

The students that went to the Academy did not score significantly higher in the year 2000. It should also be noted that no controls were in place to measure whether these students had outside interventions such as tutoring, private schooling, and assistance from parents. Students attending the Academy and students who were recommended and did not attend had significant gains or increases in their reading scores in third grade. This is due to the fact that students, who did not attend, qualified for basic skills intervention. Students attending the Academy tested out of basic skills through their performance at the Academy and as such did not receive basic skills services or intervention during their third grade schooling. This is another positive indicator of the success of the Academy.

The Academy and Non Academy groups showed improvement from second to third grade. This would suggest that the district’s instructional program at third grade might be very strong. As stated in the findings from the focus group, teachers in the
regular education program were beginning to use the strategies during the school year that were used in the Academy creating a spillover effect.

Lastly, the null hypothesis is accepted since there is no significant difference between the groups. The null hypothesis is that there is no statistically significant difference between (a.) the sustained reading improvement in second grade students who receive an intensive literacy program by teachers trained in specific comprehensive teaching strategies and (b.) the reading improvement in second grade students who do not receive an intensive literacy program by teachers who are not trained in specific teaching strategies.

Recommendations

In order to continue the strategies that the students learn at home and keep the flow of reading consistent throughout the summer, a parent-training program is recommended. The parent training program could be held at the beginning of the student session and would include all the strategies that the student will learn while they are in the program. In this way, the parents are familiar with what their child is learning and can follow through when the student is no longer attending the program. This will keep the student learning throughout the summer rather than just during the Academy program. Materials could be borrowed from the district to ensure that students are reading the appropriate leveled books.

Another recommendation is that the Academy is held throughout the summer so that students are continuously receiving intensive instruction, even if the instruction is for 1 hour each day. This will provide the students with reinforcement on a regular basis and will improve student achievement even more.
Continuing intensive instruction throughout the school year with the same teaching strategies that are implemented during the Academy is another recommendation from the researcher. Students will then have the benefit of a continuation of intensive services throughout the school year to support what they learned during the Academy. Hiring additional classroom aides to support this model may benefit the students in the long run and eliminate the number of students with below grade level scores.

Future Studies

This study investigated the impact of an intensive research based summer reading program on the reading comprehension performance of second grade students who are reading below grade level. This study was by no means exhaustive. Recognizing that the size of this sample was small because it was the first year of the program, future studies could explore a larger sample group.

Future studies could explore different grade levels and follow the progress of the students to see how their reading achievement was sustained after they attended the Academy. Comparisons could be made between these students and those students who did not attend the Academy.

An exploration into other curriculum areas in the Academy such as mathematics would also be beneficial. The same study could be researched noting the achievements gained for those students who attended the Academy taking the mathematics sessions.

Finally, staff development in the regular classrooms could be examined to determine its relationship to the success of the students made in the Academy. What is the significance of small group instruction with students and how can that be attained in the regular education classrooms?
Researchers interested in investigating and designing programs that meet the needs of students who are struggling with learning to read would benefit from this study. By isolating and analyzing various factors such as teacher training, additional grade levels, longitudinal data of future progress of the 2000 second Grade Academy students and other curricular areas such as mathematics and other studies could emerge.

Future years of the Academy program may prove that more success will prevail from an intensive program with small student/teacher ratio and with teachers receiving training of specific reading strategies.


Burskam, Dr. L. (2001). 100% literacy for all of our children, we guarantee it! *Multimedia Schools*, 8 (1), 20-25.


The New York Times. (March 19, 1998); “Learning to read, year by year.”

*Norms of ability for different age groups*. National Research Council of America.
U.S. Retrieved May 4, 2002, from


Appendices
May 3, 2001

Dear Parent(s):

Your child is eligible for the Elementary Summer Academy in ___ ILA and/or ___ mathematics for the summer of 2003. Both subjects are offered both sessions. Please read this letter carefully and decide if you and your child are willing to make a commitment to this program before registering.

Through this program, your child will have the opportunity to receive intensive instruction in the area(s) that is (are) checked above. The Academy is offered during two, three- week morning sessions from 8:00-12:00. The first session begins on July 2, is closed on July 5, and ends on July 23. The second session begins on July 26 and ends on August 13. Due to budgetary restraints, space is limited. Therefore, we ask that you follow the deadlines given for registration.

If you would like your child to attend the Academy, you must attend an informational meeting on May 11 at 7:00 p.m. in the Cifftick School All Purpose Room. Please completely fill out the enclosed registration form and bring it with you to the meeting. If your child is eligible for both sessions but can only attend one, please check which session and which subject you would like him/her to attend.

Transportation will be provided for those who need it. However, if your application is not in on time we will not be able to provide transportation. Although we expect to receive all registration forms at the meeting on May 11, the final deadline to submit all forms is Friday, May 14. Mailed registration forms must be postmarked by May 14 and can be sent to Carlotta Miller, East Brunswick Board of Education, 750 Rte. 18, East Brunswick, NJ 08816. You will receive confirmation and your child’s name tag with transportation information during the week of June 21.

Over the past two years, children enrolled in the Academy have made significant gains in phonemic awareness, reading comprehension, writing, and mathematics. Last summer every child improved in at least one area and many children reached grade level expectations by the end of the summer.

I realize that the decision to send a child to an academic summer program is not one that is easy to make. Children do need a break in the summer to experience other activities. That is why the Board of Education has designed the program so that all instruction is completed by August 13. Therefore, even if your child attends both sessions, he/she will still have almost four weeks to enjoy his/her vacation.

I look forward to seeing you on May 11. Thank you in advance for your cooperation.

Sincerely,

Carlotta Miller
ILA Daily Schedule

8:00 – 8:10 Morning Message
Summary of the day’s activities

8:10 – 8:30 Word Study
McCracken
Make a Word
Day by Day Phonics

8:30 – 8:50 Shared Reading and or Writing
Model Reciprocal Teaching Strategies
Big books, poems, summer reading kits

8:50 – 9:50 Individualized instruction using Strategies for Success
ALWAYS a reading focus question specific to the text
ALWAYS a teaching point
ALWAYS a word study segment
Other children are working in centers or doing follow ups to shared reading

9:50 – 10:20 Shared writing
4 Square
Writer’s Notebook
Teaching the rubrics by examining student or teacher writing

10:20 – 11:20 Individualized instruction
Follow up to the writing instruction
Sustained silent reading using strategies

11:20 – 11:50 Celebrate the day’s accomplishments
Read alouds (Something great to keep them in suspense)
REGISTRATION FORM

Please complete this registration form and bring this form with you to the May 11, 2001 meeting. Mailed registration forms must be post marked by May 14, 2001 and returned to Mrs. Carla Miller, Supervisor of Primary Education, Administration Building, 790 Route 18, East Brunswick, NJ 08816. Spaces are limited. PLEASE PRINT CLEARLY

Student's Name: ______________________ 2003-2004 Grade: ___________ ILA: ______ Math: ______

Home School: ______________________ Teacher: ______________________

Student's Address: ______________________ ______________________

City: ______________________ State: ______ Zip: ______

Home Phone #: (____) __________ Business Phone #: (____) __________

Cell Phone #: (____) __________ Beeper #: (____) __________

Emergency Care Name: ______________________ (to be called if child is sick and parent cannot be reached)

Relationship: ______________________ Phone #: (____) __________

SESSION PLACEMENT WILL BE BASED ON SCHEDULING AVAILABILITY

Place a check mark in front of your preferred session. We will make every effort to honor your request however, there are no guarantees. All sessions are at Shilcock School and run from 8:00 a.m. to 12:00 noon. You will be receiving a confirmation letter during the week of June 21, 2004 for the first session and during the week of July 19, 2004 for the second session.


_______ No Preference

My child would like to attend Summer Academy for: _____ ILA _____ Math

If your child is attending for both subjects, both sessions must be checked.

I understand that my child will be dropped from the program after the second absence (two absences equal one absence). Students who abuse the attendance policy will not be eligible for participation the following year.

_______ I wish to take advantage of the free busing to and from the Summer Academy.

_______ I will drive my child.

_______ Please bus my child to camp after the session. Camp Name: ______________________

The camp must be in East Brunswick.

Signature of Parent/Student: ______________________ Date: ________
February 4, 2002

Jamie P. Savedoff, Ph.D.
East Brunswick Public Schools
760 Route 18
East Brunswick, New Jersey 08816

Dear Dr. Savedoff:

I am a doctoral candidate in Educational Administration at Seton Hall University and am presently working on my dissertation. The purpose of my dissertation is to study the sustained reading achievement of second grade students who attended the Summer Academy in comparison to the reading achievement of second grade students who did not attend the Summer Academy.

This letter requests permission to use the Comprehensive Test of Basic Skills (CTBS) scores for the 1999 second grade students for this study. These students will be followed for the years 2000 and 2001. No individual, school, or school district will be identified at any time before, during, or after the study, and all data will be confidential. I will be assigning numbers to each student in order to study their progress and the key (my number and the district number for each student) will be destroyed as soon as the data is calculated.

Please indicate your approval to grant me permission by returning the enclosed Letter of Permission, signed and copied onto district letterhead, in the enclosed, self-addressed, stamped, envelopes.

Thank you for your consideration of this request. I would also be happy to provide you with a copy of the results of this study, if you are interested.

Sincerely,

Rita Costaro Mehan
As Superintendent/Chief School Administrator of the East Brunswick Public School District,

I, Jamie Savedoff, Ph. D., give Rita Cestaro Meehan, a Doctoral student in Educational Administration at Seton Hall University, permission to conduct her research as described in her letter dated February 2, 2002 according to the policies established by the Seton Hall University Institutional Review Board for Human Subjects Research and within the parameters of local Board of Education policy.

[Signature]  
2-1-2012  
Date

Excellence in Academics, Athletics and the Arts