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**Differences in Reading Achievement Between  
Title I Students and Students Not  
Receiving Title I Services**

**by  
Melissa Calcagni**

**A Thesis**

**Submitted in partial fulfillment of the requirements of the  
Masters of Arts Degree in the School Psychology  
Program of Rowan College of New Jersey  
May, 1996**

**Approved by** \_\_\_\_\_  
**John W. Klanderman, Ph.D.**

**Date Approved** 5/7/95

## **ABSTRACT**

**Melissa Calcagni**

### **Differences in Reading Achievement Between Title I Students and Students Not Receiving Title I Services**

**1996**

**Dr. John W. Klanderman, Ph.D.  
Graduate Program of School Psychology**

The present study examined the differences in reading achievement, specifically decoding ability, between first graders receiving Title I services and those not receiving the services. A sample of sixteen first graders from a suburban, racially diverse school in New Castle, Delaware was utilized. Eight of the children were selected for the study simply because they were receiving Title I instruction in the form of a one hour pullout program. The remaining eight children were selected based on test results on the San Diego Quick Assessment. The pre-test/post-test control group design was employed in this study. The Mann-Whitney test was used for evaluation and a difference at the .05 significance level was found. This reveals that there was a significant difference between the treatment and non treatment groups. The null hypothesis was therefore rejected in favor of the alternate hypothesis. The students in this study who did not receive Title I services outperformed the children who did receive services.

## **MINI-ABSTRACT**

**Melissa Calcagni**

### **Differences in Reading Achievement Between Title I Students and Students Not Receiving Title I Services**

**1996**

**Dr. John W. Klanderman, Ph.D.  
Graduate Program of School Psychology**

The purpose of this study was to examine the differences in decoding ability between first graders receiving Title I instruction and those not receiving the services. The San Diego Quick Assessment was given in the form of a pre-test/post-test control group design. The Mann-Whitney test was used and a difference at the .05 significance level was found. Children not receiving Title I instruction outperformed students receiving the service.

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## **Chapter 1: The Problem**

Year after year, groups of children throughout the country in the elementary and secondary levels are pulled out of their regular classroom for remedial reading instruction known as Title I Services. This program was intended to meet the special needs of educationally deprived children, as well as compensate for the diverse and often limited background of many students.

This study is intended to investigate the academic effects of Title I reading programs in the primary grades. While offering smaller group instruction, the children miss important classroom activities that tie reading with other curricular areas in the day. Many educators consider these federally funded programs to be beneficial to the students, while others feel that the negative effects outweigh the positive.

### **Purpose**

The purpose of this study is to compare decoding ability between children receiving Title I services with students not receiving the services. Both groups in this study had to score within a given range on a standardized reading test.

## **Hypothesis**

Children who receive Title I services, either inclusively or by means of a pull-out program, will score on the same reading level, specifically, in the area of decoding, as the children on the same reading level who remain in their regular classroom with their regular classroom teacher.

Given similar small group instruction by the classroom teacher, children can learn to read and decode without being pulled out of the classroom.

## **History of Title I of the Elementary and Secondary Education Act**

Title I of the Elementary and Secondary Education Act (ESEA) was enacted in April of 1965 with the intent “to provide financial assistance to local school districts in planning and operating special programs for educationally deprived children” (Richardson, 1971). This supplementary program was initiated as a cornerstone to Lyndon B. Johnson’s “War on Poverty” to upgrade the educational opportunities of children from disadvantaged backgrounds in low-income areas. Data provided by the Bureau of the Census along with the Commissioner of Education determined which local education associations (LEA’s) were eligible for Title I aid. Nonpublic schools were not eligible for Title I funds, however educationally deprived children

who attended these schools and lived in eligible public school areas had to be provided with comparable services.

In the late 1960's, reports of abuses of the allocation of funds began to surface. Many supporters of the program viewed it as a means to provide general aid to schools, as opposed to its' intent of focusing on individual disadvantaged children. Many school officials began spending the Title I funds on improving the general appearance of segregated black schools without providing new educational programs. Congress was also feeling the pressures from the Nixon administration to restrict the funds to the children most likely to benefit and show evidence of gains. This required close monitoring and testing of children in the program, which later led to major revisions of Title I (Richardson, 1971).

In the 1970's, Congress developed a group of programs that still function today. Rules prohibiting the use of Title I funds to supersede state and local funding were amended, along with the creation of parent advisory councils to determine allocation of funds.

In 1981, President Ronald Reagan reduced education programs into a block grant, thereby reducing their funding. Fiscal rules, regulations and state monitoring requirements were loosened and parental involvement was eliminated. Title I was also renamed Chapter I.

Parental involvement and administrative rules were restored in the 1988 re-authorization. The Hawkins-Stafford Amendments (P.L.100-297) extended Chapter I through September 30, 1993 and aimed funds at the neediest areas. Title I of the Hawkins-Stafford Act was signed into law by President Reagan in April of 1988 amending the Elementary and Secondary Education Act of 1965 and re-authorizing Chapter I of the Education Consolidation and Improvement Act. This law is in effect today and is referred to as ESEA of Chapter I. The program received bi-partisan support from both political parties in Congress (Richardson, 1971).

There were a number of new changes, rules and regulations effecting P.L. 100-297 that affected educators. Any schools showing a decline in achievement level would be required to put a Program Improvement Plan into effect. This plan must be reviewed annually by the local education agency until student performances show an improvement. Another regulation is one that affects parents. Congress deeply believes that parents play a critical role in the Chapter I program, and for that reason expects parents to become more involved with their child's education. An example of this is the fact that all children participating in the program must have written consent by at least one parent or legal guardian (Irwin, 1992).

One of the goals of the program, more specifically, is to help educationally deprived children to succeed in the regular classroom program of the local education agency. Improving achievement in such areas as reasoning, analysis, problem solving, interpretation and decision making in subjects funded by Chapter I programs is also defined in 1988 legislation. Disadvantaged children will be assessed in these areas and will not be exposed to different academic expectations than other students, under the new law (Irwin, 1992).

Attendance of the children participating in the program influences the success of the program. Congress therefore, requires close monitoring of student attendance including accurate and up to date records for evaluation purposes.

Another key feature that was defined in the 1988 legislation concerning the ESEA program is the curricula taught in the Chapter I program be coordinated with the instructional objectives of the regular classroom program. It is obvious that if these two programs are not aligned, the disadvantaged youngster will have even further difficulties succeeding in school.

The Improving America's Schools Act of 1994 (IASA) was the most recent act signed into law on October 20, 1994, as P.L. 103-382. This reauthorized the ESEA of 1965 through fiscal year 1999, including the Title I program for compensatory education.

## **Definitions**

1. **Decoding** - This is the ability to convert written words into meaning.
2. **Desegregated** - This refers to a public school which is free from racial segregation.
3. **Literature-based** - The literature-based or sometimes called “whole language” approach is an instructional philosophy which utilizes trade books to teach the skills of reading, writing, listening viewing and speaking.
4. **Thematic approach** - This is an integrated approach to teaching where all subjects are taught through common themes.

## **Assumptions**

I am aware that there may be some extraneous variables that will be accounted for in this study.

1. The majority of the children were tested together at the same time of day. Three of the children were tested one hour later. An assumption is made that the time of day was not a confounding variable which may alter test data.
2. The data was collected after the teacher was specifically trained.

An assumption is therefore made that the teacher followed through on given rules regarding the testing situation.

### **Limitations**

1. Because this sample was taken from first grade classrooms, it can only be applied to first graders between the ages of six and eight.
2. The study may also be limited to teachers using the literature based approach to reading. Findings may differ for those using a more direct instructional approach.
3. The sample was taken from only three classrooms in a suburban elementary school in Delaware. It should be noted that although it is a suburban area, the district is desegregated and children from the inner city of Wilmington and from different ethnic backgrounds are represented.
4. The reading level for both groups was determined by one testing measurement, the San Diego Quick Assessment. Other measuring devices may present different results.

## **Overview of the Thesis**

In chapter 2 the literature which is relevant to this research will be reviewed. In Chapter 3, the design of the study will be described. The nature of the sample used in the study, as well as the operational measures and procedure will be indicated. The hypotheses will be restated and a complete analysis will be given. In Chapter 4, the results of the study along with an analysis of these results will be discussed.



## **Chapter 2: Review of Literature**

Chapter 2 will begin with a discussion of the various approaches of ESEA Chapter I services. Problems with these approaches will then be discussed. This will be followed by specific studies relating to the effectiveness of the Chapter I pull-out programs. A review of other pertinent literature relating to this study will then be addressed, including student and parental factors that effect success. Lastly, a meta-analysis of thirty years of test results relating to Chapter I and student achievement will be reviewed.

### **Approaches of ESEA Chapter I Services**

There are four distinct approaches which have been used to provide Chapter I instruction in school districts nation wide. Each approach varies from district to district and a combination of one or more is evident in many areas. Below, a list of the four approaches is given. An explanation of how the approach operates, along with the advantages and disadvantages of each is supplied. More research and related data will be found throughout this chapter on the pullout program, since this is the approach that is being examined in this particular study.

## **1. Pullout Programs**

This program provides Chapter I children with the opportunity to leave the regular classroom and work in smaller groups to receive instruction. This is the most commonly used approach to compensatory education for many reasons.

Many educators believe in the personal attention that Chapter I students receive in the pullout reading programs. Carter (1984) stated many explanations as to why the pullout setting is so advantageous. For one, when compared to regular instructional settings, pullout has higher staff- to- student ratios, more student on-task behavior, less teacher time disciplining and fewer negative comments by teachers. Carter also stated that there is a higher quality of cognitive monitoring, on-task monitoring and organization of activities as opposed to regular instructional settings.

Some unintended negative consequences created by the pullout programs were also noted by Carter. There is obviously a shortened instructional time due to moving from one location to another. Also, the lessons taught the Chapter I room may and often are fragmented from the lessons taught in the regular classroom. If students fail to make a connection of content taught between the two settings, fragmentation and confusion occur. There is also a certain stigma attached to students who are pulled out of their regular classrooms for special instruction. This

may lead to lower student expectations and easier assignments from regular teachers. Confusion may also occur from the lack of communication between the regular teacher and the Chapter I teacher. Lastly, segregation may occur, as many minority students are pulled out of regular classrooms to receive services. Students may miss out on important lessons taught by the regular teacher, while they are in the pullout program. This may make it harder, rather than easier for the students to keep up in the regular classrooms (Passow, 1992).

## **2. Add-On Programs**

The most common ESEA add-on programs include pre-kindergarten, kindergarten, after-school and summer school programs. The major aim of these programs is to increase children's in-school academic achievement. Some programs have specific goals such as increasing the self-worth of the child or developing more positive attitudes toward school in general. The add-on programs represent a wide range of variation in objectives, curriculum, strategies and resources.

## **3. In-Class Programs**

In-class programs, until recently were relatively rare. This service consists of the Chapter I teacher coming into the regular classroom and working in small groups

with the eligible students. Most of the arguments for in-class services are those which are raised against the pullout program. They decrease travel time between classes, lesson fragmentation between Chapter I curriculum and the regular classroom curriculum, reduce stigma and lowered expectations of students and reduce segregation. The flip side of this argument is that the in-class program may be difficult to manage. Finding a place in the classroom where children are free from distraction and noise is not an easy task (Passow, 1992).

#### **4. Replacement Programs**

Replacement programs consist of reading or mathematics instruction which last a complete class period. In the primary grades, many districts have long-day replacement programs.

All of the preceding approaches to Chapter I services have been criticized from the beginning. Levin (1988) has argued that the pullout and remedial aspects of the programs can even impede students academically. For one observation, Levin points out that these services over emphasize the mechanics of basic skills without giving children the motivation and interest much needed. He also argues that the services do not help parents and teachers create strategies to improve academic

achievement.

### **The Effectiveness of Chapter I Pull-out Programs**

There has been extensive research in the study of the effectiveness of ESEA programs. The number of studies, however, is significantly reduced when researching pullout programs specifically. Below is a sample of studies dealing with the effectiveness of ESEA pull-out programs.

One such study by Jarvis-Janik (1993) was conducted to compare reading achievement scores of Hispanic fifth and sixth grade students. The Iowa Test of Basic Skills was used to compare 30 students who receive ESEA pullout reading instruction with 30 students who receive regular classroom instruction. The pre-post test control group design was used and the students were tested over a twelve month period.

The results of the study indicated that the pullout program and the regular reading program test scores were not significantly different for either grade five or grade six. Thus, there is no statistically significant increase or decrease in the reading achievement of both groups. These findings suggest that fifth and sixth grade students who are taught reading in the ESEA reading pullout program will not differ in reading achievement than those students taught in the regular classroom.

Another similar study was conducted by Lore and Chamberlain in 1993 in order to delineate three performance objectives to be achieved by students in grades 2-8 participating in a pull-out Chapter I reading program in the Columbus, Ohio public school district. There were three desired outcomes described in the study. Desired outcome 1(a) stated that at least 50% of the students in the program would gain at least 3.0 Normal Curve Equivalent (NCE) points for the instructional period. Desired outcome 1(b) stated that at least 50% of students in grade 1 would reach an appropriate text reading level for promotion for grade 2. Desired outcome 2 stated that at least 75% of students in grades 2-8 would be promoted to the next grade level or pass their regular reading courses. Desired outcome 3 stated that parents of at least 75% of students would participate in one or more parent involvement activities during the school year. The time interval for this study ran from September of 1991 to April of 1992. This provided a maximum of 122 possible days of instruction for grade 1 and 127 days for grades 2-8. Each desired outcome had a pupil attendance criterion of attending 80% of scheduled program days for inclusion in the treatment group.

The pre-post test control group design was used to determine if the desired outcomes have been achieved. Desired outcome 1(a) was measured through the administration of norm-referenced tests in a spring-to-spring cycle. Desired

outcomes 1(b), 2 and 3 were evaluated by locally constructed criterion-referenced tests and the district computer files.

The information gathered on the Pupil Data Sheets indicated the program served 5527 students for an average of 3.3 hours of instruction per week. The average daily membership in the program was 4323.8 pupils and the average attendance per students was 86.2 days out of 102.3 days.

Desired outcome 1(a) was attained. Of the 2100 students in the sample 59.4% made the requisite gain of 3.0 or more NCE points on the Reading Comprehension score. Desired outcome 1(b) was attained as well. Of the 27 first-grade students, 15 (55.6%) successfully completed the eligible reading level for grade 2. Desired Outcome 2 was met at every grade level. 93.8% of students in the program were promoted or passed their target courses. Finally, desired outcome 3 was also met at every grade level with parents of 95% of the students participating in the desired activities.

These findings suggest that the program was successful in achieving the 3 desired outcomes, and should therefore be continued. The author recommends close supervision of Chapter I teachers by federal and state personnel through inservice and school visitations to ensure feelings of a strong support system.

## **Related Studies**

When it comes to evaluating ESEA programs, characteristics of the programs are certainly important to look at, however it is also critical to consider characteristics of the students who participate in the program. Are their certain characteristics of student's who are successful verses student's who are not successful? Many factors come to mind including entering achievement level, sex, number of grade retentions and schools attended, number of years enrolled in a Chapter I program, self-concept and much more. Family or parental factors may also affect achievement, specifically the socioeconomic background of the family and the level of interest of the parents in schooling. A number of studies which take a closer look at some of these factors will now be reviewed.

Thistlethwaite and Mason (1993) conducted a study to isolate student and family characteristics that might have an impact upon student achievement in the Chapter I reading program. Teachers in eight different Chapter I programs completed questionnaires for the five students who had made the greatest gains in the program and for the five who had made the smallest gains or no gains at all. The sample included 38 students in the high-achieving group and 40 in the low-achieving group. A spring to spring testing cycle was used with a reading comprehension



subtest of a general achievement test. First, student data were collected including data for 19 student and parent characteristics that might impact achievement. A two-tailed *t*-test was used to compare the mean gains for the high-achievers and low-achievers with respect to the 19 factors.

Six student factors that were most significant in affecting student achievement were ones that might be characterized as being within the teacher's sphere of influence. Student self-concept, academic risk-taking and effort were significant at  $p < .001$  level. Significant at  $p < .01$  were student attitude toward reading and study habits and at  $p < .05$  was the student's attitude about the program itself.

The parent characteristics that had the greatest effect were ones which the teacher might also influence. Significant at  $p < .01$  was the attitude of the parent about the program. Significant at  $p < .05$  were the interest of the parents in schooling and the level of assistance with homework. It is evident that student and parent characteristics affecting achievement can be identified. The findings of Thistlethwaite and Mason suggest that student's self-concept, ability to take a risk, effort level, study habits, attitude about reading and the parent's attitude about the reading program were of critical importance to the success of the program.

Another study which was conducted by Reynolds in 1993 evaluated the Child Parent Center (CPC) Program, a preschool to third grade program funded by

the ESEA. The program provides health, social and academic services for pre-schoolers to grade 3 for up to 6 years, in order to promote reading readiness and affective development for school entry and beyond. Direct parent involvement in the Child Parent Centers is expected to enhance parent-child interactions as well as attachment to school, therefore promoting school readiness and adjustment. At least one-half day per week of parent involvement in the center is required.

This longitudinal study traced 915 low-income students who were differentially exposed to comprehensive school-based services for up to 6 years. The comparison group consisted of 191 children who received only an all-day kindergarten program. The results of this study indicated that the duration of exposure to the intervention was significantly related to reading achievement, grade retention and parental school involvement. Six years of program involvement were associated with a .66 standard-deviation improvement in reading achievement. A major finding of the study is the superior performance of children who participated in the program through grades 2 and 3, for 4 to 5 years. These children were found to be better adjusted than children with only 3 years of intervention. Reynolds notes that the critical factor is that of a continuous intervention beyond 2 or 3 years in which each year builds on earlier ones until a threshold of 4 or 5 years is reached. Parental involvement was found to be a positive factor, but these effects faded by

grade 5. It was therefore concluded that parental involvement was critical to the success of children through grade 4, but continuous effects would not be expected as children grow older.

### **A Meta-Analysis of 30 Years of Test Results**

Geoffrey D. Borman and Jerome V. D'Agostino from the University of Chicago did extensive research on the effectiveness of Title I Services. Together they reviewed over 150 studies, abstracts and summaries and created A Meta-Analysis of 30 Years of Test Results relating to Title I and Student Achievement. The following paragraphs summarize their research and findings.

Since the birth of Title I, both districts and states have collected evaluative and descriptive data regarding the program. The synthesis of district and state test data, as well as the sponsorship of two systematic, longitudinal assessments of participants' achievement have been created. These assessments are known as the **Sustaining Effects Study (SES)** and the ongoing **Prospects Study** and have examined the implementation and the effectiveness of the Title I program. The overall effectiveness of the program, however, has remained a matter of controversy. Although the receipt of Title I funds was conditional upon Local

Education Associations providing annual assessments of achievement in skill areas, data was difficult to compile. Aggregating and synthesizing the achievement results were unsuccessful and many districts were uncooperative. It was not until the 1979-80 school year that the State Education Associations were required to compile results and submit them to the U.S. Department of Education. This intergovernmental system, known as the Title I Evaluation and Reporting System (TIERS) has created a compilation of the results of federally-approved standardized tests from 1979 to the present.

The majority of assessment models use the norm-referenced design at the district level. According to this model, Title I programs have been evaluated based on the pre-test/ post-test scores from various standardized achievement tests administered on either a fall to spring or annual testing cycle. The Title I program was considered effective if the mean change score of participating students is greater than 0 normal curve equivalents, which are normalized percentile scores with a mean of 50 and a standard deviation of 21.06. A mean gain greater than 0 NCE's has been interpreted as evidence of impact on the assumption that in the absence of Title I instruction students tend to remain at the same national percentile rank over time -- the "equipercentile assumption" (Tallmadge and Wood, 1981).

The validity of this model has been examined by a number of researchers.

Linn (1979) found a lack of support for the equipercentile assumption and concluded that gains may be inflated by regression effects, especially with Title I students' typically low pretest scores. Another researcher, Kaskowitz (1977) found deviations from equal percentile estimates ranging from -0.2 to 2.9 from the Metropolitan Achievement Test. For many minority students whose pretest scores were moderately low, Kaskowitz found the equipercentile assumption led to an overestimate of nontreatment growth.

In addition to these regression effects, Linn, Dunbar, Harnisch, and Hastings (1982) found that in many instances teachers and administrators may produce inaccurate conversions of raw scores to NCE's and may also vary pre-test and post-test conditions in hopes of inflating the gains of the students in their programs. It should be noted, however, that with the increased use of computers in more recent years, this source of error has decreased. Linn, *et al.* (1982) suspected that encouraging pep talks by teachers preceding the post-tests may be the most frequent infraction. Practice effects along with successful teaching to the test, may be other sources of positive bias in student gains. The extent and impact of these problems on the national data is not known.

Another issue that effects different estimates of the program's effectiveness is the various testing cycles. These different results may be attributable to what David

and Pelavin (1977) term as the “summer effect”. They have demonstrated that large achievement gains by Title I students over the school year are usually followed by lessened summer growth or achievement losses. These findings suggest that disadvantaged students typically achieve no gain over the summer when compared to these normed gain standards. It is then reasonable to expect that Title I students will tend to post smaller annual gains than fall-to-spring gains.

Findings from the Sustaining Effects Study have contributed to the majority of data relating to the educational effectiveness of Title I. One particular study by Carter was conducted from 1976 to 1979 and reported the following central finding:

Participating students outperformed similarly disadvantaged students who did not receive program services, but they did not attain the levels of academic achievement of their more advantaged peers (Carter, 1981).

These findings can be interpreted to indicate that the program has had an effect on student achievement, but has not fulfilled its original intention to raise the achievement of its participants to the level of their more economically and educationally advantaged peers.

It was also noted by Carter (1981) that based on data collected for the Sustaining Effects Study, greater gains are made in the earlier grades than in the upper grades in reading. Approximately 90 percent of Title I participants are

enrolled in grades K through 8 (Kennedy, *et al.*, 1986) and most districts allocate the majority of their funds to these grades. It is therefore not surprising that children in the earlier grades have made such greater gains.

Another study by Mullin and Summers (1983) offered the most comprehensive analysis of the effectiveness of compensatory education, it included, however, a variety of state and federal programs and was not specific to Title I.

After extensive review of the studies, Mullin and Summers concluded that compensatory education participants had an edge over non-participants, but the effects were not sustainable.

### **Summary of Literature Reviewed**

There are four distinct approaches which provide Chapter I instruction in schools; the pullout program, the add-on program, the in-class program and the replacement program. The pullout program is the most commonly used approach to compensatory education for many reasons. Carter (1984) noted many explanations as to why the pullout setting is so advantageous. The staff-to-student ratios are higher, there is more student on-task behavior and less teacher time disciplining. There are, however, a number of unintended negative consequences created by the pullout programs. There is a shortened instructional time, due to the children

moving from one location to another, lesson fragmentation and stigmas attached to children who participate in the program. Students miss out on important lessons taught by the regular classroom teacher and, may therefore, find it harder to keep up in the classroom.

The research on the effectiveness of the Chapter I pullout programs varied with respect to their findings and conclusions. In one study, Jarvis-Janik (1993) found that the students who received ESEA pullout instruction did not differ in reading achievement than those students taught in the regular classroom. Another similar study, by Lore and Chamberlain (1993) however, found results which suggest that the ESEA programs were successful and should be continued with close supervision of Chapter I teachers.

Characteristics of the Chapter I programs are certainly important to examine, however it is also critical to consider characteristics of the students who participate in the programs. Family or parental factors may also affect achievement. One study conducted by Thislethwaite and Mason (1993) found that the attitude of the parents about the program, interest of the parents in schooling and the level of assistance with homework had the greatest effect on the achievement of the child.

The last topic reviewed was A Meta-Analysis of 30 Years of Test Results compiled by Geoffrey D. Borman and Jerome D'Agostino from the University of



Chicago. Over 150 studies, abstracts and summaries were reviewed to examine the effectiveness of Title I services. The compilation of results found that participating students outperformed their disadvantaged students who did not receive program services, but they did not reach the academic levels of their more advantaged peers.

The reviewed research supported the ESEA programs in that the participating children did show progress and academic gains. In most instances, however, the goal of the ESEA program to raise achievement of its participants to the level of their more economically and educationally advantaged peers, has not yet been reached.

### **Chapter 3: Design of the Study**

A description of the study and how it was designed will first be discussed. This will be followed by a detailed description of the setting and subjects as well as the measures used in the study. The independent and dependent variables will then be specified. The procedure used to gather data will be delineated along with the method to be used in analyzing the results. Finally, the hypothesis will be restated.

#### **Design of the Study**

The pre-test/post-test control group design was used in this study. The pre-test was given in September, 1995 and the post-test was given 6 months later in March, 1996.

#### **Setting and Sample**

The sample population used in this study came from a school district located in New Castle County, Delaware. The specific school is located in a low socioeconomic, suburban area surrounded by apartment complexes and small, single family homes. This community consists primarily of blue collar workers and 80% of the parents are high school educated, while only 20% are college educated. The school district is desegregated and children from the Wilmington project areas are

bussed into the suburban schools. Approximately 55 % of the students are Caucasian, while 37% are Black, 6% are Hispanic, 2% are Asian and 0% are Native Americans.

The subjects used in the study consisted of 16 first graders between the ages of six and seven. 8 of the children were selected for this study simply because they were receiving Chapter I reading services in the form of the pull-out program. To be eligible to receive Chapter I services, children must be tested by the Chapter I teacher. The scores on the San Diego Quick Assessment are then ranked and the students with the lowest scores, in the 70th percentile or less, are then eligible for services . Parental permission is necessary in order to participate and each parent must sign a consent form. The remaining 8 children were selected based on the results on the San Diego Quick Assessment, which was administered by the classroom teacher on September 23, 1995. These 8 children scored in the same area as the children participating in the Title I program. They were not eligible for services, however, for a number of reasons. Either the children entered the school after the testing date and Title I programs were already beginning, or parental permission was not given. In any case, these comparison students were performing on the same level as the Title I students.

Of the 16 students who participated in this study, 8 were female and 8 were

male. The ethnic breakdown for the sample selected was 10 Caucasian, 5 African American and 1 Hispanic. Only 25% of the children were bussed in from Wilmington, while the remaining children lived in a 5-10 mile radius of the school. Two of the children in the control group were repeating first grade.

### **Measures**

As stated previously, the San Diego Quick Assessment was utilized in the pre-test/post-test control group design. The reading level is determined by examining the area in which the child makes no more than two errors. The first level, reading readiness 1, assesses the student's ability to differentiate between letters and determine which are alike and similar. The second level, reading readiness 2, asks the student to name ten letters of the alphabet. The third level, reading readiness 3, tests the child's ability to associate sound/symbol relationships. The tester says a word and the child is given a card with 3 possible choices. The child is asked to point to the appropriate letter. The final assessments consist of a list of ten sight words for 13 different levels of reading achievement. The level at which the child makes no more than two errors is their "reading level". This assessment can be found in Appendix A.

## **Independent Variables**

There are a number of independent variables in this design. The first and foremost being the different reading programs that each group is receiving. The control group stayed in the regular classroom, and therefore received a more integrated and thematic approach to reading. The experimental group left the classroom for one hour of small group instruction with a Chapter I reading teacher. Specific examples of lessons taught will be explained in the discussion section of Chapter 5.

Another independent variable was the time at which each group received specific reading and language skill work. Both groups received this instruction between 10:30 and 11:30 am.

## **Dependent Variables**

The dependent variables were the post-test results from the San Diego Quick Assessment.

## **Procedure of the Study**

The children who had received previous Chapter I services were

automatically re-tested the following year. If the classroom teacher suspected that any other students could possibly benefit from the service, he/she could request to have them tested. Although as many as 230 students were tested in the school, only 180 were eligible for the service.

The comparison students were selected by identifying non-participating students who were most similar to Title I students in respect to educational needs. The comparison students were then tested and those who scored closest to the Title I children were selected for the study.

The students were first individually tested by the classroom teacher in September, 1995. They were then tested again in March, 1996 by the same examiner.

### **Analysis Method**

The Mann-Whitney test was used to evaluate the difference between the two assessments after they were assembled in rank-order. Significance was computed at the .05 level.

### **Hypothesis**

1. Children who receive Title I services will score on or close to the same reading

level as the children on the same reading level, who remain in their regular classroom with their regular classroom teacher.

2. Given similar small group instruction by the classroom teacher, children can learn to read and decode without being pulled from the classroom.

### **Summary of the Design of the Study**

The study utilized 16 first grade students who were attending a suburban elementary school in New Castle, Delaware. The 8 males and 8 females were of Caucasian, African American or Hispanic race. Of the 16 children, 25% were bussed in from the inner city of Wilmington, while the remaining children lived in a 5-10 mile radius of the school. The subjects were given the San Diego Quick Assessment to test their reading ability in September, 1995. Half of the participants received Title I services in the form of a pull-out program, while the remaining children stayed in their classroom to receive reading instruction. The two groups were then tested again in March, 1996, six months later. The scores were ranked and the Mann Whitney test was utilized to evaluate the difference between the two treatments. The results will be analyzed in Chapter 4.

## **Chapter 4: Analysis of Results**

### **Review of Research Purpose and Hypothesis**

The design of the study was to determine if Title I programs, specifically the pull-out programs, were more or less successful than receiving reading instruction in the regular classroom. Although Title I reading programs offer small group instruction, children miss important classroom activities that tie reading with other curricular areas. This study was intended to compare the decoding ability of children receiving Title I services with those who are on the same reading level, but remain in their regular classroom.

To measure reading ability, the San Diego Quick Assessment was given to 16 first graders between the ages of six and seven. The test was individually administered in September, 1995 and again in March, 1996. The following hypotheses were made in this study:

#### **Null Hypothesis:**

Children who receive Title I services will score on the same reading level, specifically in the area of decoding, as the children on the same reading level who do not receive services.



## **Alternate Hypothesis**

Children who receive Title I services will score on significantly different reading levels, specifically in the area of decoding, as the children on the same reading level who do not receive services.

## **Summary of Results**

The reading levels from the San Diego Quick Assessment were converted into numerical data to assess the gains that were made. The following scale was used:

RR1	RR2	RR3	PP	P	1	2	3	4	5	6	7	8	9	10	11
-----	-----	-----	----	---	---	---	---	---	---	---	---	---	---	----	----

converted into

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----

The RR levels refer to reading readiness, PP to pre-primer, P to primer and numerical levels to the appropriate grade level of reading achievement. It is important to note that since this study was limited to first graders, nothing above level 1 was achieved.

Table 4.1 illustrates the gains from one level to the next that each subject

made from September to March. Table 4.2 represents the growth of each child relating to sex. Girls seemed to outperform boys in both the treatment and non treatment groups.

Table 4.1

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GROWTH FROM SEPTEMBER TO MARCH			
<u>Title I Students</u>		<u>Children not participating in Title I</u>	
Subject 1 .....	+2	Subject 1 .....	+2
Subject 2 .....	+2	Subject 2 .....	+1
Subject 3 .....	+3	Subject 3 .....	+2
Subject 4 .....	+2	Subject 4 .....	+2
Subject 5 .....	+0	Subject 5 .....	+2
Subject 6 .....	+2	Subject 6 .....	+1
Subject 7 .....	+1	Subject 7 .....	+2
Subject 8 .....	+0	Subject 8 .....	+1
TOTALS	<hr/> +12		<hr/> +13

---

Table 4.2

GROWTH RELATING TO SEX			
<u>Title I Students</u>		<u>Students not participating in Title I</u>	
<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
+2	+2	+2	+1
+0	+2	+2	+2
+2	+3	+1	+2
+1	+0	+1	+2
<hr/>		<hr/>	
TOTALS	+5	+6	+7

An analysis of the data using the Mann-Whitney was calculated and a difference at the .05 significance level was found. This reveals that there was a significant difference between the treatment and the non treatment groups. The non treatment group consisting of children who did not participate in Title I services scored significantly higher then the treatment group. Therefore, the null hypothesis was rejected in favor of the alternative hypothesis.

It is evident, however, in Figures 4.1 and 4.2, that both groups made significant gains in the area of decoding. Table 4.1 shows that two children in the treatment group made no gains at all.

Figure 4.1

### Growth From September to March for Children Receiving Title I Instruction

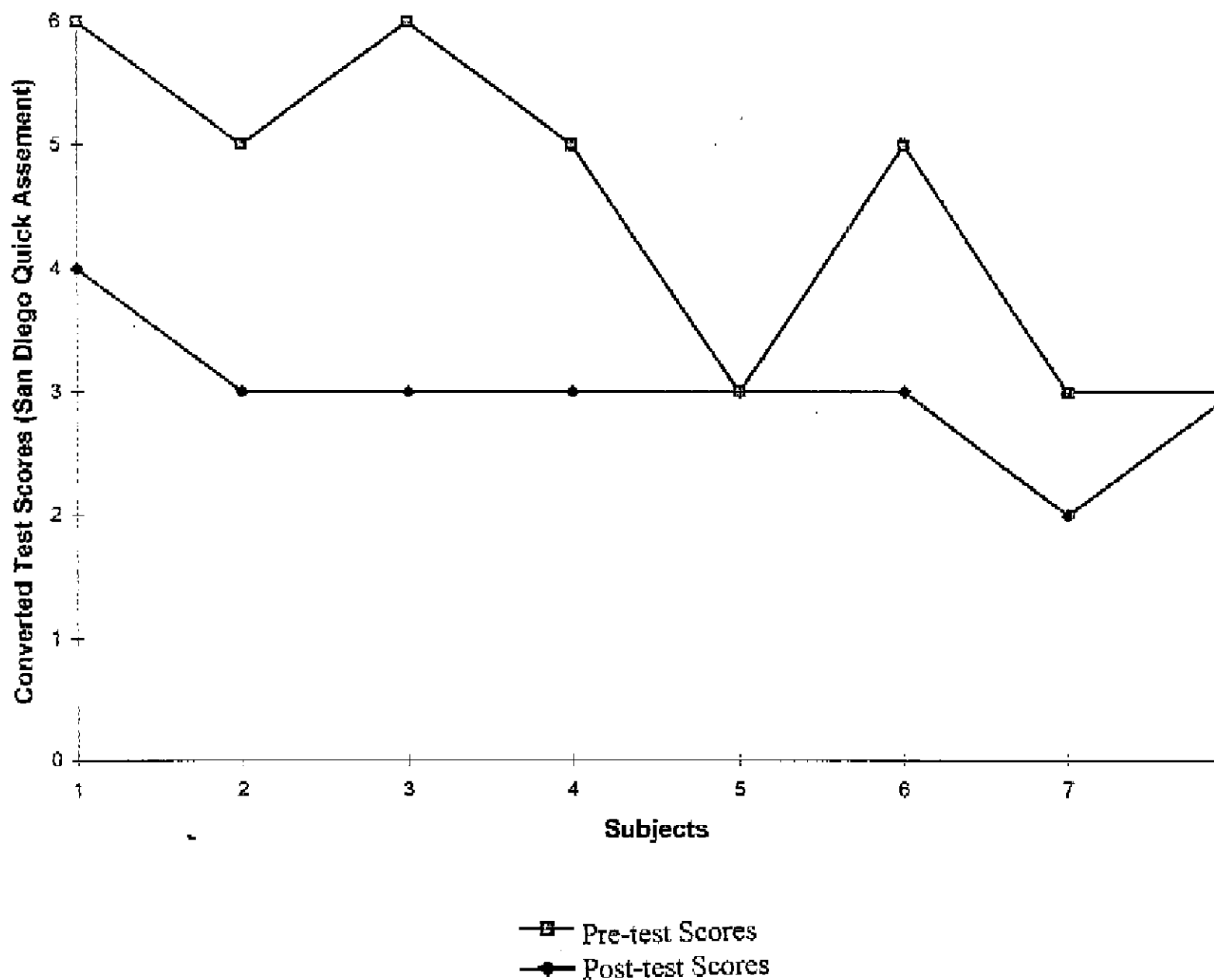
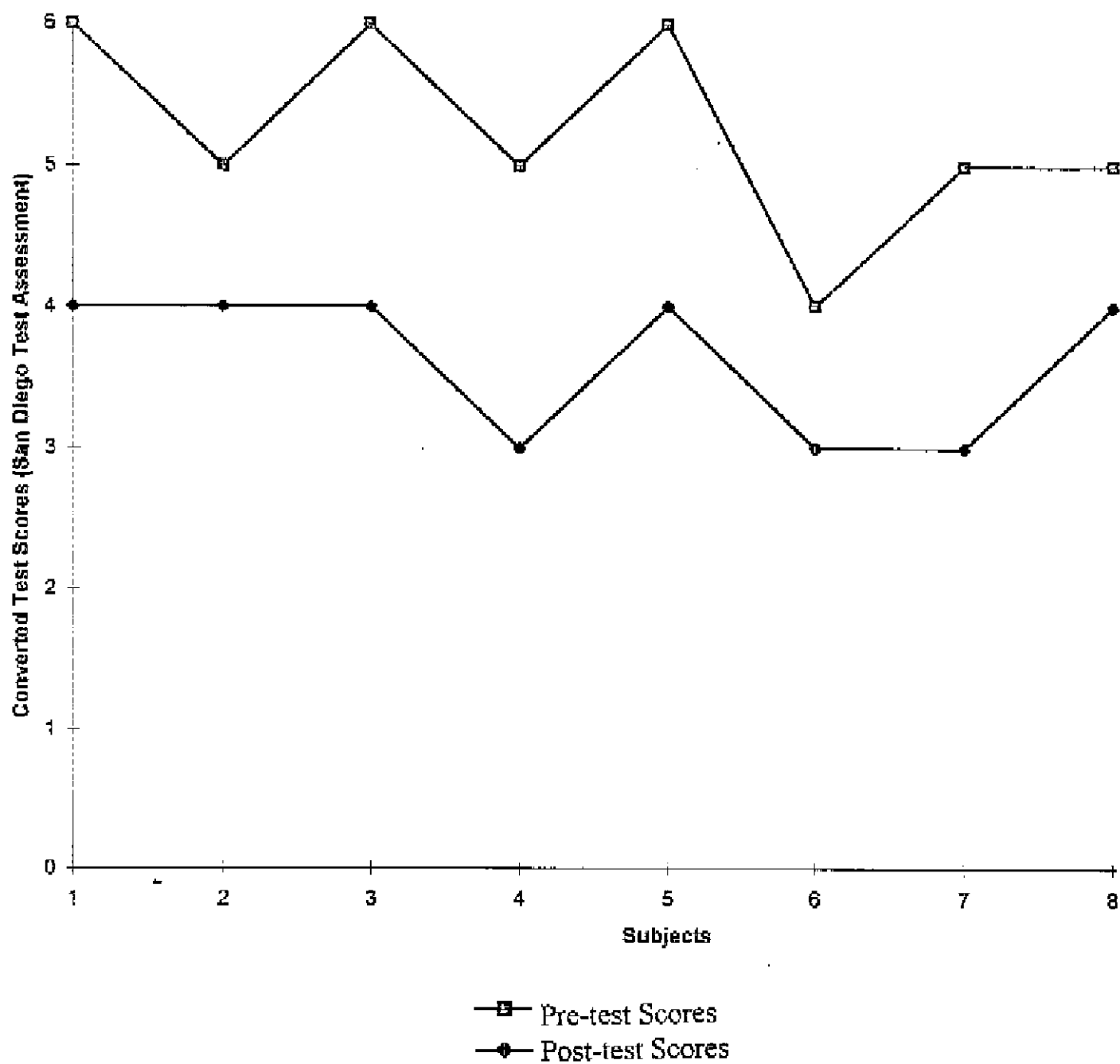


Figure 4.2

### Growth From September to March for Children Not Receiving Title I Instruction



## **Chapter 5: Summary and Conclusions**

A summary of this study will first be provided. This will be followed by conclusions, discussions and finally, implications for future research.

### **Summary**

Title I of the Elementary and Secondary Education Act was enacted to provide assistance to school districts in operating special programs for educationally deprived children. One of the goals of the program is to help educationally deprived children succeed in the regular classroom program. Improving achievement in areas such as reasoning, analysis, problem solving, interpretation and decision making in both math and reading is included in 1988 legislation. Two key features of the ESEA is attendance of the participants and parental involvement. Because attendance of the children participating in the program influences the success of the program, it is closely monitored. It is also necessary for parents to sign a consent form to enter their child in the program. Congress deeply believes that parents play a critical role in the Title I program, and for that reason expects parents to become more involved in their child's education.

There are four distinct approaches which have been used to provide Title I instruction in districts nation wide. They include **add-on programs, in-class**

programs, replacement programs and pullout programs. The pullout program was utilized in the current study. It provides Title I children the opportunity to leave the regular classroom and work in smaller groups to receive instruction. This is the most commonly used approach to compensatory education for many reasons. Many educators believe in the personal attention that Title I students receive in the pullout programs. Carter (1984) explained that pullout, when compared to regular instructional settings, has higher staff-to-student ratios, more student on-task behavior, less teacher time disciplining and fewer negative comments by teachers. There are also, however, many negative consequences related to the pullout program noted by Carter. There is obviously a shortened instruction time due to moving from one location to another. The lessons taught in the Title I rooms may often be fragmented from the lessons taught in the regular classroom and if students fail to make a connection between the two settings, confusion occurs. A stigma is attached to many children who are pulled out of the classroom, which may lead to lower student expectations. Segregation is also evident, as many minority students are pulled out of regular classrooms to receive services.

The research findings on the effectiveness of the Chapter I pullout programs varied with respect to their findings and conclusions. Jarvis-Janik (1993) found that the students who received ESEA pullout instruction did not differ in reading

achievement than those students who did not receive services. Lore and Chamberlain (1993) however, found results which suggest that the ESEA programs were successful and should be continued with close supervision of Chapter I teachers. A Meta-Analysis of 30 Years of Test Results compiled by Borman and D'Agostino was also examined to study the effectiveness of Title I services. The results found that participating students outperformed their disadvantaged students who did not receive program services, but they did not reach the academic levels of their more advantaged peers.

The present study examined whether there were differences in decoding ability between first graders who received Title I services and those on the same reading level, who did not receive services. Both groups in the study had to score within a given range on the San Diego Quick Assessment in September, 1995. They were then tested again, six months later, in March, 1996. It was hypothesized that children who receive Title I services will score on the same reading level, specifically in the area of decoding, as the children on the same reading level who do not receive services.

The subjects of the present study included 16 first graders between the ages of six and seven from a suburban school in New Castle County, Delaware. Eight of the children were selected for the study simply because they were receiving Title I



services in the form of the pullout program. The remaining eight children were selected based on their test results on the San Diego Quick Assessment. They scored in the same area as the children receiving services but were not participating in the program.

The pre-test/post-test control group design was utilized in this study. The Mann-Whitney test was then used to evaluate the difference between the two assessments.

## **Conclusions**

It is evident that both groups made significant gains between the pre and post test. The Mann-Whitney was calculated and a difference at the .05 significance level was found. This reveals that there was a significant difference between the treatment and non treatment groups. Therefore, the null hypothesis was rejected in favor of the alternate hypothesis. The students in this study who did not receive Title I services outperformed children who did receive services. These interesting results will be addressed below.

## **Discussion**

As the results indicate in this study, the children who did not receive Title I

services outperformed children who did receive services in the form of a pullout program. There are a number of factors and issues that need to be addressed at this point to clarify why this may have taken place.

It was stated earlier in this study that a big disadvantage to the Title I pullout reading program was the fragmentation that can occur between what is being taught in the Title I room as opposed to the regular classroom. Many educators, especially in the primary grades, are teaching thematically and trying to integrate all subjects together. This approach is thought to be more responsive to the interests, abilities, and needs of the children and is respectful of their developing aptitudes and attitudes (Meinbach, 1995). In thematic teaching, the literature, as well as the reading and writing activities are chosen and based on various units of study or areas of interest. It is obvious that if children are taken out of a “thematic classroom” for one hour of fragmented reading instruction, confusion can most likely occur.

The children who did not leave the classroom for Title I instruction could have made more connections with reading and other subject areas. Their interest level in reading could be higher and therefore they may have had more self-confidence to decode the unknown words on the San Diego Assessment. Many times the Title I children feel like they are missing out on many classroom activities, and this may lower their confidence and self-esteem.

Two children in the treatment group showed no area of growth at all. One child had severe attention problems, which limited his ability to listen and learn for periods of time. It was not until February, 1996, one month before the post test was administered, that this child was diagnosed with severe Attention Deficit and Hyperactivity Disorder and put on medication. If this procedure had occurred sooner, more growth may have occurred.

Another factor that may explain why the second child in the treatment group made no gains is attendance. It was discussed earlier how critical attendance is to the success of the Title I program. It is obvious that if children do not come to school on a regular basis, growth in all academic areas may be suffer. Attendance was a huge problem for one specific child in the treatment group. She missed between one and two days of school each week. This may explain why she made no gains from September to March.

The results that were found could have, very likely been due to the small sample of children that were utilized. A sample of sixteen may not be the most reliable or valid.

### **Implications for Future Research**

For future research on the effectiveness of Title I services, a number of

revisions to the present study could be made. For one, a more detailed assessment could be used. The San Diego Quick Assessment is an accurate, quick measure of decoding ability. In future studies, however, more detailed and time consuming tests could be administered to get a more accurate and reliable measure of decoding skill. Although more time is needed for testing, the results would be more beneficial to the researcher.

Future studies should also include larger sample sizes. A sample of 16 subjects does not reflect the population sample as would a sample of 50 or more subjects. In conducting a study with a much larger number of subjects and with a more time consuming measuring device, more researchers and volunteers would be needed. Perhaps offering stipends to volunteers or teachers for assisting in the study would encourage individuals while ensuring more accurate results.

## REFERENCES

- Borman, G. D. & D'Agostino, J. V. (1995, April). Title I and Student Achievement: A Meta-Analysis of 30 Years of Test Results. Paper presented at the American Educational Research Association Annual Meeting, San Francisco, California.
- Carter, L.F. (1984). The Sustaining Effects Study of compensatory and elementary education. Educational Researcher, 13(7), 4-13.
- David, J.L. and Pelavin, S.H. (1977). Research on the effectiveness of compensatory education programs: A reanalysis of data. Menlo Park, CA: SRI International.
- Irwin, P. M. (1992). Elementary and Secondary Education Act of 1965: FY Guide to Programs. CRS Report for Congress. Washington, DC: Congressional Research Service. (ERIC Document Reproduction Service No. ED 355 625)
- Jarvis-Janik, M. (1993). The Effectiveness of ESEA Chapter I Pull-Out Programs on Reading Achievement. Unpublished manuscript.
- Kaskowitz, D.H. & Norwood, C.R. (1977). A study of the norm-referenced procedure for evaluating project effectiveness as applied in the evaluation of project information packages. Menlo Park, CA: Stanford Research Institute.
- Kennedy, M.M., et al. (1986). The Effectiveness of Chapter I Services. Second Interim Report from the National Assessment of Chapter I. Washington, DC: Office of Educational Research and Improvement.
- Levin, H.M. (1988). New schools for the disadvantaged. Unpublished paper prepared for the Mid-Continent Regional Educational Laboratory, Stanford University, California.

- Linn, R.L. (1979). Validity of Inferences Based on the Proposed Title I Evaluation Models. Educational Evaluation and Policy Analysis, 1, 23-32.
- Linn, R.L., Dunbar, S.B., Harnisch, D.L., and Hastings, C.N. (1982) The Validity of the Title I Evaluation and Reporting System. Beverly Hills, CA: Sage Publications.
- Lore, R., & Chamberlain, E. (1993). Language Development Component Chapter I Reading Program 1991-92. Final Evaluation Report. Ohio Department of Program Evaluation. (ERIC Document Reproduction Service No. ED 358 439)
- Meinbach, A., Rothlein, L., & Fredricks, A.D. (1995). The Complete Guide to Thematic Units: Creating the Integrated Curriculum. Norwood, MA: Christopher-Gordon Publishers, Inc.
- Mullin, S.P. & Summers, A.A. (1983). Is more better? The effectiveness of spending on compensatory education. Phi Delta Kappan, 64(3), 339-346.
- Passow, H. A. (1992, June 28-30). Title I ESEA/Chapter I ECIA: A Quarter Century Effort to Provide Educational Equity and Equality. Paper presented at the International Seminar on "Educational Advancement and Distributive Justice: Between Equity and Equality", Jerusalem, Israel.
- Reynolds, A. J. (1993, March 25-28). Effects of a Preschool Plus Follow-on Intervention Program for Children at Risk. Paper presented at the Biennial Meeting of the Society for Research in Child Development, New Orleans, Louisiana.
- Richardson, E. L. (1971). Questions and Answers: Programs for Educationally Deprived Children. U.S. Department of Health, Education, & Welfare. (ERIC Document Reproduction Service No. ED 072 155)
- Tallmadge, G.K., & Wood, C.T. (1981). User's guide to the ESEA Title I evaluation and reporting system. Mountain View, CA: RMC Research Corporation.

Thistlethwaite, L. & Mason, M. (1993). Chapter I Reading Programs: Do Student/Family Factors Make a Difference? Reading-Horizons, 33(3), 259-271.

## APPENDICES



# RECORD OF RESPONSES (San Diego Quick Assessment)

Name \_\_\_\_\_ Date \_\_\_\_\_ Examiner \_\_\_\_\_ Grade \_\_\_\_\_ Sec. \_\_\_\_\_

SUMMARY: (Circle level/levels at which child makes no more than two errors.)

PP1 RR2 RR3 PP 1 2 3 4 5 6 7 8 9 10 11

ERRORS: Leaving off endings; adding endings; incorrect accents; refusal; partial attempt.  
(Child must pronounce word as it appears on card.)

PP1 Matching Level (Alike or different)		RR2 Reading Readiness Level (Letter names)		RR3 Reading Readiness (Circle letter you think this word begins with)	
B	B	B		D	B A (Bird)
A	C	A		A	E K (Apron)
M	M	M		L	F M (som)
C	C	C		B	C G (car)
S	D	S		O	S P (sad)
J	J	J		A	B J (jeep)
T	T	T		D	G I (tag)
H	H	H		A	H B (house)
D	L	D		D	I M (door)
W	M	W		W	G J (wig)

PP	Primer	1	2
see	you	road	our
play	come	live	please
me	not	thank	myself
at	with	when	town
run	jump	bigger	early
go	help	how	send
and	is	always	wide
look	work	night	believe
can	are	spring	quietly
here	this	today	carefully

3	4	5	6
city	decided	scanty	bridge
middle	served	business	commercial
moment	amazed	develop	abolish
frightened	silent	considered	trucker
exclaimed	wrecked	discussed	apparatus
several	improved	behaved	elementary
lonely	certainly	splendid	comment
drew	entered	acquainted	necessity
since	realized	escaped	gallery
straight	interrupted	grim	relativity

7	8	9	10
amber	capacious	conscientious	sany
dominion	limitation	isolation	jerkin
sundry	pretext	molecule	nausea
capillary	intrigue	ritual	gratuitous
impetuous	delusion	momentous	linear
blight	immaculate	vulnerable	inept
wrest	ascent	kinship	legality
enuberate	acrid	conservatism	aspen
daunted	binocular	jaunty	amnesty
condescend	embankment	inventive	barometer