


5-1998

The Long Term Effects of the Reading Intervention Program, an Early Intervention Program Similar to Reading Recovery

Wendy Tarbox Watt
The College at Brockport

Follow this and additional works at: https://digitalcommons.brockport.edu/ehd_theses

 Part of the [Elementary Education Commons](#), and the [Language and Literacy Education Commons](#)

To learn more about our programs visit: <http://www.brockport.edu/ehd/>

Repository Citation

Watt, Wendy Tarbox, "The Long Term Effects of the Reading Intervention Program, an Early Intervention Program Similar to Reading Recovery" (1998). *Education and Human Development Master's Theses*. 858.
https://digitalcommons.brockport.edu/ehd_theses/858

This Thesis is brought to you for free and open access by the Education and Human Development at Digital Commons @Brockport. It has been accepted for inclusion in Education and Human Development Master's Theses by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmeyers@brockport.edu.

**THE LONG TERM EFFECTS OF
THE READING INTERVENTION PROGRAM,
AN EARLY INTERVENTION PROGRAM SIMILAR TO READING
RECOVERY**

THESIS

**Submitted to the Graduate Committee of the
Department of Education and Human Development
State University of New York
College at Brockport
in Partial Fulfillment of the
Requirements for the Master Degree of
The Reading Teacher**

**by
Wendy Tarbox Watt
State University of New York
College at Brockport
Brockport, New York
May 1998**

SUBMITTED BY:

Wendy Jarboe Watt 5/7/98
Candidate Date

APPROVED BY:

George Z. Rigg 5/15/98
Thesis Advisor Date

Arthur E. Smith 5/13/98
Second Reader Date

Antonia E. Baker 5/14/98
Director of Graduate Studies Date

This is dedicated to my loving family...

To my mother and father who raised me to believe that I could be whatever I wanted to be, and then supported me in word and deed when it took forty years and two masters' degrees for me to figure out what that was. Together, we share in the celebration of this accomplishment. And to Steve, Stephanie, and Melissa, who, without hesitation, have selflessly supported and applauded all of my efforts, and have kept clapping, for all of these years.

You are the wind beneath my wings.

Abstract

During the 1995 -1997 school years, 35 students were identified at Holmes Road School (in Greece, NY) as being in the lowest 20% of their peer group in reading and related skills during first or second grade. These students received 12-16 weeks of individualized, one-on-one, reading instruction in a program similar to Reading Recovery called the Reading Intervention Program (RIP). During this program, students made significant gains. The purpose of this study was to determine if RIP has had a lasting effect on the performance of students who have had the 'treatment' as compared to their peers. Standardized test scores of the treatment group were compared to their peer group. If no statistically significant difference was found between the two groups at the time of the testing, then the treatment (RIP) was proven effective.

Data were analyzed against the median scoring levels of students at the local and national levels. The findings were calculated including the scores of the students later identified and classified as Special Education and excluding those scores of the students placed in Special Education. Using the Chi square calculations and a significance level of .05, the RIP students' scores were not statistically significantly different from the median level of students at the national level. The RIP students' median DRP scores remained significantly different from the Greece median scores on these DRP tests.

Table of Contents

Chapter I Statement of Problem.....	4
Purpose	
Research Question	
Need for Study	
Definition of Terms	
Chapter II Review of literature.....	7
Research in the Development of Reading Recovery	
Components of Reading Recovery: A No Fail Approach	
Variations on the Theme of Reading Recovery	
Chapter III Design of Study.....	23
Methodology	
Subjects	
Materials	
Procedures	
Chapter IV Analysis of Data.....	26
Analysis of Data	
Interpretation of Data	
Summary	
Chapter V Conclusions and Implications.....	42
Implications for Further Research	
Implications for Classroom Practice	
Summary	
References.....	50
Appendix A.....	52

CHAPTER I

Statement of Problem

Purpose

In the early Reading Intervention Program (RIP), students identified as being in the lowest 20% of their peer group in reading and related skills during first or second grade received an additional 12-16 week reading program similar to Reading Recovery. Students made significant gains during the program. The purpose of this study was to determine if RIP has had a lasting effect on the performance of students who have had the "treatment" on standardized tests as compared to their peers.

Research Question

How did students who participated in RIP during first or second grade perform on standardized tests as compared to their peers? How did these same students perform a few months later, a year later, or two years later?

Need For The Study

Programs similar to Reading Recovery such as *The Reading Intervention Program*, (RIP) are being implemented in many school districts based upon a need for early intervention. The program is justified by the students' gains within the program, cost effectiveness, and the lasting impact of the success attained. In

order to be confident that an educational program should be adopted for use, school districts must rely on research to provide data that support the success of the program.

Definition of Terms

pull out- RIP, like Reading Recovery, is a "pull out" program. Instruction is delivered individually by one teacher to one student, in a separate room other than the classroom. The student is "pulled out" of the classroom for instruction.

push in- Support services are provided within the main classroom, by an additional teacher, other than the main classroom teacher.

successfully discontinued- Students that receive Reading Recovery continue the instruction for approximately 60 sessions, until they are at the same reading level as peers within their classroom. When the students reach this level, they are said to have been "successfully discontinued." If students' Reading Recovery program was discontinued before this level was achieved, the students would not have been "successfully discontinued."

Storybox Series-A set of books that are leveled in order of difficulty. These books are used in classrooms, RIP, Reading Recovery.

Reading Intervention Program (RIP)-The treatment program that is being examined for its long term effectiveness in this study. RIP has no formal

teacher training component, as does Reading Recovery. This researcher was the RIP teacher for each of the students in this study.

Teacher training was accomplished by the reading teacher at Holmes Road School, and included two day visits to the Rush Henrietta School District to observe and discuss their RIP program which was set up under a senior teacher who had traveled to New Zealand and studied Reading Recovery at Marie Clay's school for a summer.

Each of the subjects received 12-16 weeks of pull out service in addition to regular classroom instruction and instructional support. RIP met 4 days per week for 30 minutes per session. Parental support was mandatory or the students would be discontinued. Parents signed a permission form stating they would read with their child each night in order for their child to be included in the program.

RIP sessions followed the standard Reading Recovery format, with familiar texts, new texts and a writing component. Repeated readings, retellings, and phonics instruction (as it applied to the unknown words), were integral parts of the program. Students made significant gains during the program, often going from non-reader status to "able readers" of texts at Degrees of Reading Power (DRP) levels of 32-45.

Degrees of Reading Power (DRP) - A measurement of the difficulty of texts. A

DRP value of 41-45 is considered an end of the year, first grade level.

CHAPTER II

Review of the Literature

Purpose

In the early intervention program RIP, students identified as being in the lowest 20% of their peer group in reading and related skills during first or second grade received an additional 12-16 week reading program similar to Reading Recovery. They made significant gains during the program. The purpose of this study is to determine if RIP has had a lasting effect on the performance of students who have had the "treatment" on standardized tests as compared to their peers.

Research In The Development of Reading Recovery

In 1972 Marie Clay prepared *A Diagnostic Survey* which outlined ways to locate children who needed specially prepared individual programs. Teachers who used this survey asked that a set of procedures be developed to help them re-teach the young children identified as having difficulty. Reading Recovery was born out of this effort (Clay, 1979).

A three year research program was undertaken to develop and refine the requested set of teaching procedures which became Reading Recovery. Directed

by Clay and sponsored by the Department of Education and the University of Auckland in New Zealand, Clay collaborated with highly experienced teachers and researchers and incorporated extensive field trials in different types of schools to validate these methods during development. Initial studies showed that the procedures for identifying and helping young children with reading difficulties were extremely effective. Over 90% of children who had a complete Reading Recovery program were able to reach the levels of their classmates, and appeared to have developed an independent system of reading (Clay, 1985).

These original studies did not contain a comparison control group. . . Therefore, in the early 1980's, after three years of study at Ohio State University, a pilot study was conducted in which a comparison control group was included. Of these students, 73% were successfully discontinued with average reading skills. These children performed better than the comparison group. The Reading Recovery tutored children continued to be able to read significantly higher levels of text than the comparison group in follow-up comparison studies (Clay, 1985).

Other follow-up research confirmed these results. The Reading Recovery students continued to read at the median level of their class two years after tutoring (Curtin, 1994). Curtin's 1994 study was aimed at the long term follow-up of students who had participated in Reading Recovery in first grade, keying in on their reading achievement during third grade. No statistically significant

difference was reported for those children who had received Reading Recovery compared to those students who had received only regular classroom instruction. These findings affirm the goals of the Reading Recovery program which are to assist the lowest readers in first grade to reach the median of their class and to maintain that rate of gain.

These trials showed that with minor adaptations for local conditions, the Reading Recovery program successfully transferred across educational systems and with different curriculum. The key to this was the attention that was paid to the quality and type of teacher training and to the challenges of implementing the program in an education system (Clay, 1985). Reading Recovery is now a national program in New Zealand, and research continues.

The Reading Recovery program was designed to target the lowest 20% of the first grade population who are taken out of their regular classroom for one-on-one instruction. The goal of Reading Recovery is to help these first graders become independent readers and to use their own knowledge to solve the problems they encounter during reading (Donley, 1993). Children are tutored until they reach the median ability level of their classmates. These children are still considered at risk and are watched closely.

The Wake County Public School System implemented Reading Recovery in 1990-1991 and expanded the program the following year. Annual site reports

by the Reading Recovery staff found positive short term results for students who had received help during both years. Seventy-seven percent of the students in 1990-1991 and 73% of the 1991-1992 students who completed the program were achieving at the same level as their peers when discontinued. These students were followed academically and tested again to determine Reading Recovery's long term impact in areas such as reading level, word analysis, vocabulary, and comprehension. Analyses were somewhat more mixed, but generally positive (Donley, 1993).

Jelks-Emmanuel (1994) conducted a study including a total of 34 minority students from a low socioeconomic neighborhood in Chicago. Reading Recovery was administered to the target group prior to first grade. When the students reached first grade they were tested to see if the Reading Recovery program had enhanced their ability to learn to read. Although no statistical significance was found in the reading achievement of the sample groups, the researcher concluded that Reading Recovery had both immediate and long term effects, and that the immediate effects were believed to be both substantial and dramatic. Jelks-Emmanuel stated that if data collection had been performed differently, the outcome may have been different.

Dunkeld and Dunbar oversaw a successful Reading Recovery research study in 1983. They linked children's progress to strategy acquisition. Children

with the fewest strategies made the least progress. Children who made good progress had acquired many strategies and were using them. The researchers cautioned that a variety of strategies alone did not ensure progress.

In a 1987 research study Lyons used Reading Recovery with non-classified students and students classified as Learning Disabled (LD). A total of 82% of the first grade readers who were classified as LD were successfully discontinued from the Reading Recovery program. These students required more sessions to reach the median reading level of their peers than did the non-classified students. Reading Recovery proved to be a successful instructional program for children in both sample groups.

Overall, the results of Reading Recovery have been found to be quite positive. Though expensive, the program cannot be measured by cost, numbers served, and standardized test scores alone. Reading Recovery students improve in self esteem and their love of reading. Parents acknowledge the enthusiasm for reading displayed by their children, as well as the student's ability to self correct. These things are of immeasurable importance (Donley, 1993).

Components Of Reading Recovery: A No Fail Approach

Clay utilized the expertise of many excellent teachers when she compiled and validated the Reading Recovery procedures. Using recognized techniques of effective instruction, there is little question as to why Reading Recovery works.

Jelks-Emmanuel (1994) listed the components of the Reading Recovery pilot study conducted in 1984-1985 at Ohio State University. The components listed were:

- 1) special training for teachers
- 2) combining interrelated reading and writing activities
- 3) intensive daily instruction
- 4) one-on-one instruction
- 5) interaction between teacher and student that supports the development of effective cognitive strategies.

Reading Recovery teachers receive special training for approximately one year. Utilizing a room with one way glass, peer critiquing and clinical experiences are conducted by a skilled leader. According to Clay's model, both the Reading Recovery teacher and the classroom teacher are certified and trained in Reading Recovery. The program can be used with success however, whether or not the cooperating classroom teacher has had special training in Reading Recovery, as Pinnell concluded in his comparative research between Reading Recovery and a similar program, 'Success For All' (1988). Students receive intensive daily instruction for 30 minutes in addition to the regular classroom instruction. Reading Recovery continues for approximately 60-70 pull-out sessions.

In theory, reading and writing are described as cyclical and

complementary processes (Clay, 1979, 1985). As children read and write, they make the connections that form their basic understandings about both. Learning in one area enhances learning in the other. There is considerable evidence that the processes are inseparable. Therefore, reading and writing activities should be integrated in instructional settings (Pinnell, 1988). This is one of the cornerstones of the Reading Recovery program. Children are given the opportunity to explore the whole range of literacy learning in each session, including interrelated reading and writing activities.

The Reading Recovery framework stipulates that children must be involved in whole text reading and writing tasks rather than isolated drill and practice. Each day students re-read familiar stories and apply their problem solving skills to a new text. This results in much of the students' time on task involved in reading and re-reading whole texts. Much research supports this instructional practice. Stallings and Kaskowitz's research (1974) reported that higher reading gains were positively correlated with time spent engaged in reading actual text during the first, second and third grades. Herman (1985) found that re-reading significantly increased reading comprehension and fluency. This reading practice results in increased awareness by the student during reading and better comprehension, enabling readers to understand and have control over their own learning (Opitz, 1991). In a study in 1994, Juel identified instructional

practices that make tutoring effective. Repeated readings were one of the activities most significantly related to students' increase in reading performance.

One-on-one instruction enables Reading Recovery teachers to individually select books and specify instructional goals and practices for each child. Therefore, students work precisely at their instruction level, within their zone of proximal development, which allows for the acceleration of learning that Clay speaks of which must take place in order for the students to "catch up" to their peers (Clay, 1985). The success of the Reading Recovery program depends on the trained teachers' ability to observe a child's reading and writing behavior, to understand the child's underlying cognitive processes, and to make instructional decisions, including adjusting his or her own behavior in response to the child (Wong, 1988).

Wong's study (1988) analyzed the interaction between teachers and students that supported the development of effective cognitive strategies. Half of the discourse in the studied Reading Recovery sessions were attributed to teachers' scaffolding comments. An example of this would be when a student came across a word he did not recognize and the teacher would point out that the word has a cluster that the student may recognize. (The teacher may then cover up part of the word.) Then the teacher might ask the student what sound the initial consonant makes. Finally, the teacher may ask the student to blend the sounds, or

may model the process. High levels of this support were in evidence as students read familiar texts and statistically significant levels (higher) emerged when students encountered new texts. As students reread familiar texts, teachers became less directive and began to coach their attempts to read. These teachers offered comments designed to give readers a new perspective on their oral reading and overall performance. In contrast, when students read new texts, these teachers responded by increasing their prompting, discussing, and modeling comments. Teachers invited their students to read chorally as a way of developing fluency, and prompted students to attend to visual and meaning cues. Teachers and students also discussed the story line (Wong, 1994).

The use of several modalities in the teaching of reading has been advocated for more than 50 years. Much attention has been given to tactile as well as visual and auditory approaches, with attention to tracing and writing words. Reading Recovery lessons encourage learners to reinforce verbal and auditory learning styles with the use of magnetic letters for word building, writing on magic slates, painting letters, words and messages. Curtin (1994) attributes some of Reading Recovery's success to this multi-modal approach.

Another component which is necessary to the success of the Reading Recovery program is parental involvement. Alexander concluded in the 1992 study of Reading Recovery that parents must see their role as "guiders" of the

reading process, that teachers extend the learning that has taken place in the home. Holland (1987) emphasized that the family-school-home relationship should be a triangular one. Parents' role as the primary literacy teachers of their children is emphasized, and parental involvement is pursued in this study of Reading Recovery. Holland identified two avenues that schools should pursue to empower parents to act as partners in their children's literacy development: 1) defining the role of the school, 2) emphasizing the importance of the role of routine home activities in teaching children to read and write.

The subjects of Holland's study were Appalachian students and parents. Cultural and social influences on literacy instruction were noted in the study. The teachers' communication styles were categorized as they pursued and encouraged the parents to be partners in their child's education. "Active" teachers insisted that parents come to school and observe an actual Reading Recovery session so that they could better support their children at home. "Passive" teachers attempted to engage parents' support, but gave up rather quickly. "Active" teachers were more successful in engaging the support of the parents. This in turn, was an important ingredient in the success of the individual child's Reading Recovery program.

Many of the research proven principles of effective instruction found in Reading Recovery have been discussed. Clay also contributed some new ideas and techniques as part of Reading Recovery. Clay (1979) used scientific

principles to record evidence of progress rather than relying on standardized testing. These systematic observations of children's reading and writing is an integral part of Reading Recovery. Clay explained that when a child's reading performance is less than perfect there are opportunities to record the work done by the child to "get it right, to puzzle it out." This reveals something of the processes by which the child monitors and corrects his own performance. When the child encounters something new, he reveals what he has learned by how he approaches the novel thing. These observations become the opportunities upon which teachers build lessons, making the learning process within a Reading Recovery session very dynamic.

Clay relies on the running reading record as the primary tool for diagnosis of reading abilities. The running record is a marking system using checks for accurately read words. Errors and substitutions are written with the correct word below it. Self-corrections and re-readings are indicated. Over time, these records of oral reading provide a cumulative record of a child's growth. This assessment is an important part of the Reading Recovery program and an important piece in a student's portfolio.

Variations On The Theme of Reading Recovery

Many variations on the theme of Reading Recovery have sprung up in recent years. The new programs retain some aspects of Reading Recovery, and

change others in search of a remediation technique that is "just right" for an individual school's specific needs and population.

First Steps is an early intervention program for underachieving first grade pupils, implemented in North Carolina. First Steps borrowed much from Reading Recovery but differs in the areas of assessment, tutor training and teaching procedures. The First Steps program consists of thirty to forty minutes of one-on-one instruction each day. A session consists of a sequence of activities, similar to those in a Reading Recovery session. The first few minutes are spent re-reading familiar texts. Word study follows for 15 minutes. (Beginning word study skills include such things as learning the alphabet, sorting picture cards by initial sound, pairing sounds to letters, identifying beginning consonants, word families, rhyming words, medial vowels and ending sounds. Games and categorization activities are the vehicle for this instruction.) Writing activities follow for eight minutes and reading of new material finishes up the five minutes of the session. As in Reading Recovery, students are able to read increasingly more difficult texts. When students have reached level 10 in the Storybox series, basals are introduced. In four out of five classrooms where First Steps was tested, Morris concluded that this program was successful in helping low-readiness first graders learn to read (1995).

The Compacted Approach to Reading (CAR) was designed to prevent

rather than remediate reading problems. In the 1994 study of this program in Chattanooga, Tennessee, Gettys suggests that the strategies and techniques used in the Reading Recovery Program had been replicated in a cost effective manner by servicing students in small group settings in the CAR program. Students were instructed for 21 weeks. The Compacted Approach to Read specifically involves early intervention with an at risk population, small group instruction, intensive, compacted instruction which builds on students' strengths, direct instruction emphasizing development of student independence in reading, development of self esteem, and acceleration of instruction. Instruction is focused on repeating readings. Many texts are used including picture books as well as teacher-student written materials.

CAR instructional objectives include getting beginning readers involved with books and language, intervening before reading difficulties are overwhelming and before self esteem falls, and raising student reading performance to the average range for classroom settings. CAR attempts to help children improve their own reading habits which will enable them to become lifelong learners, and prevents the early labeling of children and the stigma attached to the labeling process. At the conclusion of the study, a small percentage of students were recommended for testing with a special education placement. The results indicated that there was a statistical significance to the

improvement that the first grade students demonstrated at the end of one year of the CAR program.

Pollack (1993,1994) used a derivation of Reading Recovery in a program called the Early Literacy Program. Students were taught in small groups by an Early Literacy teacher for 40-45 minute sessions. Many of the activities developed by the Early Literacy teachers were based upon activities established in the Reading Recovery program. Metropolitan Achievement Tests were administered as the pre and post test assessment. Instruction was to continue until students were at the same reading level as their peers. This study continued for 127 days. The lessons consisted of reading to pupils, guided readings from charts and stories, shared reading and writing activities tailored to build on what the students know, and the strengthening and development of a self improving reading system which would lead to continued growth. There was a parent group associated with the Early Literacy Program.

At the end of the program, the three desired outcomes were met. In order to be successful, the program requirements were 1) a minimum reading level to be achieved, 2) the classroom teacher to be pleased with the students' progress, and 3) parents were required to show a minimal amount of involvement. Fifty-six percent of the treatment group achieved these outcomes. The study was conducted the following year with 8 specific recommendations. Suggestions

included: added inservice, better coordination and input from classroom teachers, and increased involvement by the parents. The minimum desired outcomes were met during the second year of the study also.

Success For All was first used in urban Baltimore in 1988. Structured as a tutorial and focused on first graders, Success For All calls for instructional coordination with the classroom. In Success For All, the child reads highly controlled word-patterned texts and receives systematic instruction in basic phonics patterns. Reading Recovery uses texts with natural and dynamic instruction. Success For All continues through third grade while Reading Recovery applies only to first grade. Pinnell (1988) performed a comparison study of Success For All students, and students in Reading Recovery. Eight dependent variables were used to compare the two groups of students. One hundred and thirty-three students participated.

Results indicate that children who were deliberately engaged in an integrated program of reading and writing achieved higher on both measures. Children who were engaged daily in holistic activities involving reading and writing achieved accelerated progress. These behaviors were noted in children who were successful in the study: 1) Children drew on previously read texts for specific words and phrases to use in writing. 2) Through writing children developed an awareness of visual information. 3) Children used reading to check

their construction of the cut-up sentence. 4) Children used previously read texts as a resource for composing their written messages. These observations provide further evidence that reading achievement that is brought about by connecting reading and writing. The evidence supported the use of Reading Recovery *and* Success For All.

CHAPTER III

Design of the Study

Purpose

In the early intervention program RIP, students identified as being in the lowest 20% of their peer group in reading and related skills during first or second grade received an additional 12-16 week reading program similar to Reading Recovery. They made significant gains during the program. The purpose of this study was to determine if RIP has had a lasting effect on the performance of students who have had the "treatment" on standardized tests as compared to their peers.

Methodology

Subjects: The early intervention program (RIP) is used with students in first or second grade. A total of thirty-five students participated in RIP in 1995, 1996, and 1997. These students are currently in third, fourth, and fifth grade. Eleven of the thirty-five RIP participants have been classified as Special Education students. The statistical analysis was calculated with these students in the RIP population, and then again without their data. Unfortunately, eight of the thirty-five original RIP students have moved out of the district. Partial information is available for some of these students and it will be included where it is available.

Eight of these students are currently in fifth grade, six girls and two boys. Two of these students have moved out of the district, and a total of three students have been classified as special education within this group. Fourteen RIP students are now in fourth grade, including seven girls and seven boys. Three of these students have moved out of the district, and five have been classified as Special Education. Of the fourteen students in third grade, eleven are girls and three are boys. Two of these students have moved out of the district, and three have been classified as Special Education students. This study documents these students' achievement on standardized tests as compared to their peers, one, two or three years later.

Materials: Students participating in RIP during the Spring of 1995, 1996, and the Spring of 1997 and are still residing within the school district had their second, third and fourth grade standardized test scores included in this study.

Procedures: Over the last three years, thirty-five subjects have received one-on-one reading instruction during first or second grade through the Reading Intervention Program (RIP), a method similar to reading Reading Recovery. More specific information on this program is included in the definitions section of Chapter I.

The oldest of these students are in the fifth grade. Their standardized test scores in second, third and fourth grade were included in the statistical analysis.

21

Accordingly, students in fourth grade had data from second and third included while the youngest of those included in this study are in third grade, and only their second grade test scores are included here.

Some of these students have moved out of the district, some have been classified as learning disabled, some have continued their struggle with reading, and some have seemingly "recovered". This study statistically examined the long term effects of RIP on these students' achievement on standardized tests and determined if this group of students was statistically different than the norming population. This measure was calculated against the local median score and the national median score at the 2nd, 3rd and 4th grade levels. The data were calculated with and without the scores of the students who were classified and placed into Special Education using a .05 significance level and the Chi Square calculation.

CHAPTER IV

Analysis of Data

Purpose

In the early intervention program RIP, students identified as being in the lowest 20% of their peer group in reading and related skills during first or second grade received an additional 12-16 week reading program similar to Reading Recovery. They made significant gains during the program. The purpose of this study is to determine if RIP has had a lasting effect on the performance of students who have had the "treatment" on standardized tests as compared to their peers.

Analysis of the Data:

Null Hypothesis (H_0)- Given the median scores of the norming populations for the nation (national level) and Greece, NY (local level) for the second, third and fourth grade DRP standardized tests given to students, **the frequency of scores below the median is the same as the frequency above the median** as compared to the scores of students' within the RIP treatment group.

This null hypothesis will be **rejected** if the frequency above the median is not equal to the frequency below the median meaning, **there is a statistically significant difference between the standardized test scores of the norming population and the population of children that participated in the RIP**

treatment program. Mathematically, this would happen if the calculated value for Chi Square was less than (<) the critical value in the table for one degree of freedom (3.841).

Failure To Reject The Null Hypothesis (Ho) - Failure to reject the null hypothesis would occur if the median scores for the RIP treatment group were not significantly different than those of the norming population as determined by the Chi Square calculation at one degree of freedom. Mathematically, this would occur if the calculated value for Chi Square was greater than (>) the critical value in the table for one degree of freedom (3.841).

Confidence Level - Obtained at one degree of freedom is .05

Median Scores for the Standardized DRP Tests:

	2nd Grade	3rd Grade	4th Grade
national	29	40	50
local	38	49	59

In summary:

a. If the computed value of Chi Square (the test statistic) fell in the rejection region, (value of Chi Square greater than 3.841) we rejected the null hypothesis.

In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

b. If the computed value of Chi Square was less than the critical value (3.841) we failed to reject the null hypothesis. In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsSecond Grade Standardized TestRIP Treatment vs. National Median (29) on 2nd Grade DRP Test*Chi Square*

Below	Above
21	14

$$X^2 = \frac{(21 - 17.5)^2}{17.5} + \frac{(14 - 17.5)^2}{17.5}$$

$$X^2 = \frac{12.25}{17.5} + \frac{12.25}{17.5}$$

$$X^2 = 0.7 + 0.7$$

$$X^2 = 1.4 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

1.4 < 3.841 Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsSecond Grade Standardized TestRIP Treatment Group Without Labeled Students vs. National Median

Below	12.5	Above	12.5
11		14	

$$X^2 = \frac{(11 - 12.5)^2}{12.5} + \frac{(14 - 12.5)^2}{12.5}$$

$$X^2 = \frac{2.25}{12.5} + \frac{2.25}{12.5}$$

$$X^2 = 0.18 + 0.18$$

$$X^2 = 0.36 \quad \text{Critical Value } X^2 (X = .05) = 3.841$$

0.36 < 3.841 Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsSecond Grade Standardized TestRIP Treatment vs. Local Median (38) on 2nd Grade DRP Test

Below		Above	
	17.5		17.5
28		7	

$$X^2 = \frac{(28 - 17.5)^2}{17.5} + \frac{(7 - 17.5)^2}{17.5}$$

$$X^2 = \frac{110.25}{17.5} + \frac{110.25}{17.5}$$

$$X^2 = 6.3 + 6.3$$

$$X^2 = 12.6 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

$12.6 > 3.841$ **Therefore, the null hypothesis was rejected**

* In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

CalculationsSecond Grade Standardized TestRIP Treatment Group Without Labeled Students vs. Local Median

Below	Above
18	7

$$X^2 = \frac{(18 - 12.5)^2}{12.5} + \frac{(7 - 12.5)^2}{12.5}$$

$$X^2 = \frac{30.25}{12.5} + \frac{30.25}{12.5}$$

$$X^2 = 2.42 + 2.42$$

$$X^2 = 4.84 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

4.84 > 3.841 Therefore, the null hypothesis was rejected

* In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

CalculationsThird Grade Standardized TestRIP Treatment vs. National Median (40) on 3rd Grade DRP Test

Below		Above	
	9		9
9		9	

$$X^2 = \frac{(9-9)^2}{9} + \frac{(9-9)^2}{9}$$

$$X^2 = \frac{0}{9} + \frac{0}{9}$$

$$X^2 = 0 + 0$$

$$X^2 = 0 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

$0 < 3.841$ *Therefore, the null hypothesis failed to be rejected*

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsThird Grade Standardized TestRIP Treatment Group Without Labeled Students vs. National Median

Below		Above	
	6		6
5		7	

$$X^2 = \frac{(5-6)^2}{6} + \frac{(7-6)^2}{6}$$

$$X^2 = \frac{1}{6} + \frac{1}{6}$$

$$X^2 = 0.16 + 0.16$$

$$X^2 = 0.33 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

0.33 < 3.841 Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

Calculations

Third Grade Standardized Test

RIP Treatment vs. Local Median (49) on 3rd Grade DRP Test

Below	9	Above	9
17		1	

$$X^2 = \frac{(17-9)^2}{9} + \frac{(1-9)^2}{9}$$

$$X^2 = \frac{64}{9} + \frac{64}{9}$$

$$X^2 = 7.1 + 7.1$$

$$X^2 = 14.2 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

14.2 > 3.841 Therefore, the null hypothesis was rejected

* In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

CalculationsThird Grade Standardized TestRIP Treatment Group Without Labeled Students vs. Local Median

Below		Above	
	6		6
11		1	

$$X^2 = \frac{(11-6)^2}{6} + \frac{(1-6)^2}{6}$$

$$X^2 = \frac{25}{6} + \frac{25}{6}$$

$$X^2 = 4.16 + 4.16$$

$$X^2 = 8.3 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

$8.3 > 3.841$ Therefore, the null hypothesis was rejected

* In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

CalculationsFourth Grade Standardized TestRIP Treatment vs. National Median (50) on 4th Grade DRP Test

Below		Above	
	3		3
3		3	

$$X^2 = \frac{(3-3)^2}{3} + \frac{(3-3)^2}{3}$$

$$X^2 = \frac{0}{3} + \frac{0}{3}$$

$$X^2 = 0 + 0$$

$$X^2 = 0 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

$0 < 3.841$ Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsFourth Grade Standardized TestRIP Treatment Group Without Labeled Students vs. National Median

Below	Above
0	3

$$X^2 = \frac{(0 - 1.5)^2}{1.5} + \frac{(3 - 1.5)^2}{1.5}$$

$$X^2 = \frac{2.25}{1.5} + \frac{2.25}{1.5}$$

$$X^2 = 1.5 + 1.5$$

$$X^2 = 3 \quad \text{Critical Value } X^2 (X=.05) = 3.841$$

3 < 3.841 Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

CalculationsFourth Grade Standardized TestRIP Treatment vs. Local Median (59) on 4th Grade DRP Test

Below		Above	
	3		3
6		0	

$$X = \frac{(6-3)^2}{3} + \frac{(0-3)^2}{3}$$

$$X = \frac{9}{3} + \frac{9}{3}$$

$$X = 3 + 3$$

$$X = 6 \quad \text{Critical Value } X \quad (X=.05) = 3.841$$

$6 > 3.841$ Therefore, the null hypothesis was rejected

* In this case, there was a statistically significant difference in the scores of norming population and the treatment group.

CalculationsFourth Grade Standardized TestRIP Treatment Group Without Labeled Students vs. Local Median

Below		Above	
	1.5		1.5
3		0	

$$X^2 = \frac{(3 - 1.5)^2}{1.5} + \frac{(0 - 1.5)^2}{1.5}$$

$$X^2 = \frac{2.25}{1.5} + \frac{2.25}{1.5}$$

$$X^2 = 1.5 + 1.5$$

$$X^2 = 3 \quad \text{Critical Value } X^2 (X = .05) = 3.841$$

3 < 3.841 Therefore, the null hypothesis failed to be rejected

* In this case, there was no statistically significant difference in the scores of norming population and the treatment group.

Interpretation of the Data

When studying the results of the statistical calculations, a clear pattern emerges. On the 2nd, 3rd and 4th grade standardized DRP tests, the RIP treatment group's scores were compared to the national median. The median scores of the RIP treatment group and the median of the national scores were not significantly different, statistically speaking. In fact, within the confidence level of .05, the median scores of the treatment group and the national median scores were statistically similar. This finding was obtained when the scores of the labeled students, those students later classified as Special Education students, were omitted from the calculations, as well as when they were included in the calculations.

In contrast to this finding, when the scores of the RIP treatment group were compared to the median scores of those students in the district or local area of Greece NY, the groups' scores were found to be significantly different, statistically speaking. This result was obtained when comparing the 2nd, 3rd and 4th grade standardized tests, and it was the same whether or not the classified students' scores were included in the calculations.

Summary

The RIP treatment program was provided to students if their scores fell

71

within the lowest twenty percent of their kindergarten or first grade class on the assessments that were considered early indicators of reading abilities. RIP was provided as an early intervention to prevent or lessen the gap between these identified students and their peers. The findings of this research indicate that one, two, or three years later, on the average, these students' scores had not reached the median average of their local classmates. They were however, performing at a level consistent with the nation median for students taking the same test. In

summary:

- 1) The RIP students "recovered" to the same level (statistically speaking) as students performing on the average, when calculated and compared to all of the students in the nation.
- 2) The RIP students continued to score behind the median average of their local peers within this same timeframe.
- 2) These findings were consistent whether or not the labeled students' scores were included in each of the calculations.

CHAPTER V

Conclusions and Implications

Purpose

In the early intervention program RIP, students identified as being in the lowest 20% of their peer group in reading and related skills during first or second grade received an additional 12-16 week reading program similar to Reading Recovery. They made significant gains during the program. The purpose of this study was to determine if RIP has had a lasting effect on the performance of students who have had the "treatment" as compared to their peers.

Conclusions

Data were analyzed against the median scoring levels of students at the local and national levels. The findings were calculated including the scores of the students later identified and classified as Special Education and excluding those scores of the students placed in Special Education. Using the Chi square calculations and a significance level of .05, the RIP students' scores were not statistically significantly different from the median level of students at the national level. The RIP students' median DRP scores remained significantly different from the Greece median scores on these DRP tests.

Implications For Further Research

The findings of this study bring some questions to mind which, if

answered, would be helpful in explaining the results. Who are the rightful "peers" of a treatment group within a stable population of suburban, middle class students in a fairly large, upstate New York School district? Is it reasonable to think that students scoring within the lowest twenty percent of their class in kindergarten or first grade could "recover" and replace their classmates as average within a short (one to three year) timeframe? Are the standardized DRP tests used to measure reading abilities valid indicators of reading performance? Did test anxiety play a part in the assessments identifying the students and later rating their reading abilities?

The goal of the RIP program was to "fix" the reading difficulties of students identified on the original assessments, and to enhance these students' reading abilities such that they were equal to or better than those of *their peers*. The RIP treatment was proven successful if we identify the peers in the study as all of the students in the nation. The treatment falls short if we compare the RIP experimental group to their local peers or classmates.

The goal of the RIP program was to enhance the *students' reading abilities* such that they were equal to or greater than their peers. Although significant gains and accelerated progress was during the RIP remediation, when students were successfully discontinued and tested later using the DRP standardized test, were *reading abilities* what were being measured? Was the DRP test a valid

indicator of the enhanced reading abilities? Are there more valid indicators of students' reading abilities available?

Were other difficulties, such as test anxiety responsible for students' poor performance on the original assessments? Were these same students again affected by test anxiety later on the DRP tests? Does this account for students scoring poorly independent of their reading abilities?

The students' scores on standardized tests were compared to those of their peers one, two or three years after these same students had been identified as in the lowest performing twenty percent of the class. Is it reasonable to believe, without much movement in the population, that it is possible to bring the average of these low achieving students scores up to the fiftieth percentile in this short timeframe? With a stable population, in order for these students' averages to have been brought "up" to the median, others students scores would have to have slipped down. Could this occur in so short a timespan? Many, if not all of the students raised their percentile ranking within the local area on the tests from their original ranking prior to the treatment period.

Parents of students who took part in this remediation were deeply involved as partners in their children's education. These parents agreed that this remediation program had a significant, positive impact on their child's reading abilities. Was the partnership of school and parents important in the success of

the program? Further research, perhaps qualitative in nature, would be warranted to determine why the process works and validate the findings.

In Donley's study (1993), he called for further study on the Early Reading Approach. This approach utilizes Reading Recovery techniques in small groups. Because it uses Reading Recovery techniques, the instructional basis has already been proven. Teaching in small groups would clearly be more cost effective than individual instruction. Research on how to identify children that would benefit as much from a small group program as from an individual program would be very useful. As well as the long term effectiveness of the instructional practices delivered in small groups.

Cost is the driving force behind many variations of Reading Recovery, including RIP. Gettys (1994) stated that the small percentage of students that do not make the reading connection in the CAR program are recommended for testing and possibly a special educational placement. If my students have continued difficulty and are not successfully discontinued from RIP, they are referred for psychoeducational testing and possibly a special educational setting placement, too. The median scores of my RIP students were calculated with and without the scores of the classified students. As classified students, their scores are not expected to measure favorably against the median of all non-classified students. But is this program a cost effective way to increase these students' reading performance?

76

My students have benefited and enjoyed the individualized instruction they received within RIP. But some questions that are still unanswered in my mind: How should children be selected for the program? What impact does developmental characteristics or reading readiness have on an individual's progress once in RIP? What characteristics would make students respond as well to small group RIP instruction as to individual instruction? What more can be done to instill the independent use of reading strategies? If DRP scores are used as the measure of success for students' reading abilities, how can RIP students improve their DRP scores? How should instructional time and resources be directed?

Implications For The Classroom

Increased time on the reading task is warranted for all children that are having difficulty making the reading connection, and intensive daily instruction should be a priority in every classroom. Research shows that reading gains are directly and positively correlated to the amount of time that a student spends reading (Stallings & Kaskowitz, 1974). This speaks to the type of instruction that needs to occur if students are to make significant reading gains.

While good classroom instruction may be all that is necessary for some children to succeed in reading, many children will need more intensive instruction and should be offered the intervention that is needed for them to succeed. Some children will require one-on-one instruction to make the connection, while certain students can benefit just as much from a small group approach. Being able to identify the most effective and least costly instructional approach for each child will help stretch tight resources and reach more students. (Gettys, 1994).

Wong's (1994) study contains several implications for the improvement of early literacy instruction in the classroom. Wong states that regular classroom instruction often narrowly focuses on sound - symbol relationships and not on the dynamics between the meaning, visual, and structural cueing systems. Prompting students to attend to the three cueing systems is not consistent with current instruction in the regular classroom but would be helpful, as it has been with

Reading Recovery students. Helping students to develop a self improving set of reading strategies would be an appropriate instructional objective at the first grade level, also.

In Wong's 1994 study, he discusses the principles of responsive instruction in the Reading Recovery session and how they could be applied in regular classroom literacy activities. Students' instructional levels and zones of proximal development are very individual. Classroom instruction is not usually provided individually, but in groups of varying size. Teaching within a student's zone of proximal development is difficult to do with a group of children. Traditional activities may not provide enough mutual engagement between teacher and student for the teacher to identify these boundaries. In the future, teachers may need to acquire new skills and strategies for interacting with students during reading lessons if they are to be able to identify and teach within the students' zones of proximal development (Wong, 1988).

In order to help students develop self improving reading strategies, teachers will need to help students develop a metacognitive approach to reading. Classroom teachers will need to learn how to alter their instructional stances depending on their students' familiarity with texts. Reading Recovery teachers have been trained to observe students closely and seem to know what text to focus on, when and how to prompt, when to tell, when to coach, and when to allow readers to direct their own

reading. They are very aware of their students' zone of proximal development and when each scaffolding behavior is appropriate (Wong, 1994).

Pinnell implies in the 1988 study that classroom teachers should create more settings which demand the use of both reading and writing and foster children's ability in making connections between the two processes. She believes that this is of great importance to the children who have difficulty making connections between what they already know and the new material or processes to be learned. Helping children connect reading and writing in the classroom, as it is connected in RIP and Reading Recovery, is a promising area for research and for classroom application.

References

- Alexander, P. (1992). Intense early intervention for young readers at risk. (Report No. CS-001-465) Edmonton, Alberta : Alberta Dept. Of Education. (ERIC Document Reproduction Service No. ED 363 866)
- Clay, M. (1979). The early detection of learning difficulties. Auckland, NZ: Heinemann.
- Clay, M. (1985). The early detection of reading difficulties. Auckland, NZ: Heinemann.
- Curtin, J. (1994) . The effectiveness of the reading recovery program on reading achievement. (Report No. CS-001-462) Chicago, IL : US Department of Education (ERIC Document Reproduction Service No. ED 363 863)
- Donley, J. (1993). A study of the long-term effectiveness of the reading recovery program. (E&R Report No. 93.09A). Wake County, NC: American Educational Research Association. (ERIC Document Reproduction Service No. ED 359 197)
- Dunkeld, C. , Dunbar, Z. (1983) Early Detection of Reading Differences. Use of Marie Clay's "Diagnostic Survey and recovery procedures" with first grade children. (Report No. CS-009-428) Portland, OR:*(ERIC Document Reproduction Service No. ED 301 846)
- Gettys, C. (1994). Compacted approach to reading (CAR) : An intervention program for at-risk beginning readers. (Report No. CS-012-120) Nashville, TN: University of Tennessee at Chattanooga. (ERIC Document Reproduction Service No. ED 381 764)
- Holland, K. (1987). Parents and Teachers: Can home and school literacy boundaries be broken? (Report No. RC-016-801) Columbus, OH: University of Massachusetts at Amherst. (ERIC Document Reproduction Service No. ED 300 182)
- Herman, P. (1985). The effects of repeated readings on reading rate, speech, pauses, and word recognition accuracy. Reading Research Quarterly, 553-564, 1985.
- Jelks-Emmanuel, M. (1994). Reading recovery informal reading instruction on the reading achievement of pre-schoolers at the end of 1st grade. (Report No. CS-012-072) Chicago, IL: (ERIC Document Reproduction No. ED 380 775)
- Juel, C. (1996). What makes literacy tutoring effective? Reading Research Quarterly, 31, 268-289.

- Lyons, C. (1988). The effect of instruction on the oral reading behaviors of children classified as learning disabled. (Report No. CS-009-165) Ohio: American Educational Research Association. (ERIC Document Reproduction Service No. ED 295 131)
- Morris, D. (1995). First steps : An early intervention program. (Report No. CS-012-305) Boone, NC: Appalachian State University. (ERIC Document Reproduction No. ED 388 956)
- Optiz, D. (1991). Hypothesizing about reading recovery, Reading Horizons, 409-20, June 1991.
- Pinnell, G. (1988). Success of children at risk in a program that combines writing and reading. (Technical Report No. 417) Cambridge, MA: Bolt, Beranek and Newman, (ERIC Document Reproduction Service No. ED 292 061)
- Pinnell, G. (1988). Reading recovery : Early intervention for at risk first graders. Arlington, VA : Educational Research Service.
- Pollack, J.(1993). Early literacy program, grades one and two 1991-1992. Final evaluation report. (Report No. CS-001-341) Columbus, OH: Dept. of Program Evaluation. (ERIC Document Reproduction Service No. ED 358 441)
- Pollack, J.(1994). Early literacy program, grades one and two 1992-1993. Final evaluation report. (Report No. CS-011-848) Columbus, OH: Dept. of Program Evaluation. (ERIC Document Reproduction Service No. ED 375 376)
- Stallings, E., Kaskowitz, A. (1974) Follow-through classroom observation evaluation, Menlo Park, CA: Stanford Research Institute.
- Wong, S. (1994). Characterizing teacher-student interaction in reading recovery lessons. (Reading Research Report No. 17) Athens, GA : National Reading Research Center. (Eric Document Reproduction No. ED 375 392)

Appendix A

RIP Students' DRP Scores

	2nd DRP	3rd DRP	4th DRP	Classified S	
Spring 1995					
JC		55 moved	moved		
MC		30	31	52	
AP		29	37	52	
BN		34 moved	moved		
MF		21	26	48	Yes
GA		26	32	49	Yes
DC		16	20	45	Yes
MM		27	37	50	
Fall 1995					
TE		24	42		
KB		17 moved		yes	
SR		24	40	yes	
SK		28	40	yes	
CG		25	42		
BB		30	43		
SS		24 moved			
CG		24	34		
KA		24	33		
Spring 1996					
LW		23	45		
PH		49	70		
AT		38	47		
PG		26	45		
KM		14	25	yes	
Spring 1996-Spring 1997					
SF		43			
GS		26		yes	
CG		23			
KF		31			
CG		38			
CD		25			
LE		23			
VC		33			
AS	moved				
JP		38			
JB		34			
MC		38			
ND		17		yes	
VR		15			