An Investigation into a Reading Intervention Modeled After Reading Recovery

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An Investigation into a Reading Intervention Modeled After 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 Degree of Master of Science in Education

by

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Abstract

How does a Reading Recovery program effect the ability and attitudes of the participating students? In this explanatory study, eight students, participating in an intervention program modeled after Reading Recovery, were examined based on skills and attitudes. All but one student showed marked improvement in attitude toward reading and writing by the end of the study. All students showed some growth in skill level, as well. The study was limited in scope as well as in implementation of the Reading Recovery Program. On an individual level, Reading Recovery was successful in improving both skill and attitude of students in need of intervention.
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It is estimated that between ten to twenty percent of children in school in the United States have difficulty learning to read. Even in the best classroom environments, some children lag behind. The best classroom teaching in a group setting is not sufficient for the ten to twenty percent of children having difficulty reading, at-risk readers. Neither whole-language nor any other kind of classroom literacy program provides the answer for all children. For whatever the reason, regular classroom instruction is not enough to insure that these students become readers and writers. They need extra help to make that critical breakthrough that suggests that they understand the underlying processes (Pinnell, 1989).

Research suggests that remediations in compensatory group instruction either through pull-out models (Pinnell, 1985) or through in class models (Lyons, 1989) do not provide enough support at the right time to help these at-risk learners. Research reports that in remedial pull-out settings readers who are already struggling are provided with divergent curricula. Each setting focusing on different curricula gives rise to a situation in which the student is not clear how and which strategies to apply to attack a word. Strategies favored in one setting fail in a second setting. The result being that instruction in one setting may interfere with that in another, confusing the student about the nature of reading and the application of strategies (Johnston, Allington & Afflerbach, 1985).
If what is gained from this research is that compensatory instruction is not successful in assisting at-risk students become average readers then we need to research programs that are trying to bridge the gap in understanding. The implication is that programs need to identify and service students early before there are severe gaps in understanding. There are several programs that attempt to intervene early to prevent the growth of a gap in understanding. One such program is Reading Recovery. The question guiding this research is, when a reading intervention program modeled after Marie Clay's Reading Recovery is implemented what benefits occur for the student. Before the benefits of a program can be discussed the program elements and philosophy must be known.

Reading Recovery is a specifically designed set of interventions credited to Marie Clay, a New Zealand child psychologist. Marie Clay conducted initial research that lead to the formulation of Reading Recovery procedures (Pinnell, 1990). The intervention had been implemented in New Zealand for twenty years and serves nineteen percent of the country's first grade children. In 1984, Reading Recovery was introduced to the United States through Ohio State University, Ohio Department of Education and the Columbus, Ohio school system (Dyer, 1992).

Reading Recovery is a program devised for students that are using a narrow range of reading strategies and are applying their knowledge in rigid ways. It is a program that works to broaden the students' strategies and develop their
background knowledge (Pinnell, 1989). Reading Recovery is devised to help each child reach the average reading range for their particular instructional setting (Lyons, 1989). The goal is for learner independence. The program does this by encouraging students to learn to use what they know to discover what they do not know. The desire is for students to develop the habits of a good reader: to learn to monitor comprehension, self correct and to read for meaning (Pinnell, 1990).

There are several strategies good readers use that Reading Recovery works to develop in its students. Initial skills that all readers need to know are: to read with one-to-one correspondence of words, to move from left to right to return to the left of the next line, and to read from the top of the page down. After these skills are known students need to learn how to use several more involved strategies such as self monitoring and cross checking. Self monitoring is the use of language structure and visual information to detect miscues, errors. Students reading for meaning are monitoring when the passage does not make sense. Cross checking involves using all available information to check the reader's predictions. Information the reader's check their predictions against are what they already know about the topic, picture clues, semantics, and graphophonics. Good readers continue to search for clues until they find a solution. They are able to use these strategies to decipher text. Finally, good readers self correct. They are able to
correct their own miscues through the strategies discussed and gain meaning from the text (Pinnell, 1989).

Many children who have difficulty with reading instruction in kindergarten and in first grade continue to have difficulty in elementary, middle and high school, regardless of the remedial reading programs or dedicated teachers. The problem is that the longer a child fails the greater the gap to be repaired and the longer the child practices poor responses that prevent learning effective strategies. The importance of this information is the essential nature of intervention early on when reading behaviors are emerging. Intervention needs to occur before students feel like failures in reading to prevent the chasm to occur (Pinnell, 1985).

Students are identified before failure is experienced through a diagnostic survey. The survey was designed by Marie Clay and is devised of six parts. The first is a record of reading behavior referred to by Clay as a running record. This is a copy of the text with the student's oral reading recorded. There is a prescribed notation for documenting when the child miscues, reads something other than what is written, repeats or omits words, is given the word and when the student self corrects. This documentation is used to determine an accuracy rate. The rate then reflects whether the student is reading a text at the independent, instructional or frustration level.
The second part of the survey is the test of phonic knowledge, also referred to as letter identification. Students are asked to name and give the sound of the letter for both the upper and lower case alphabet. Concepts about print is the third aspect of the survey. This is an inquiry as to whether the student knows concepts of printed language such as: the front and back of the book, the top of the page, that the print tells the story, that they can point out a letter, a word, upper and lower case letters, the function of space and the use of punctuation (Clay, 1988).

Then, a test of sight vocabulary is given through the use of a word list. The word list used in this study is the Dolch List although Marie Clay uses the Ready to Read, New Zealand Series. This test reveals the reading vocabulary of the student.

At the fifth step, a test of writing vocabulary is given. The student is given ten minutes to write down all the words they know, after which the student must successfully read them in order to be given credit for the word. Finally, a dictation test is administered. This test gives students credits for the sounds they write correctly. This provides information as to how the student can analyze sounds in context unlike the test of phonic knowledge (Clay, 1985).

This information is correlated and used in two ways. First it is used to identify the lowest twenty percent of the students to consider for intervention. Secondly, this data is used to write a summary of the student's strategies to provide a starting
point for the intervention. It also helps the intervening teacher get to know the
student.

Reading Recovery is performed in the first grade. It takes place one-on-one
between teacher and student for thirty minutes each day. The program usually
spans twelve to twenty weeks but graduates students earlier if they are able to
reach the average reading level of their class. If students come to the end of the
program without meeting average performance for their class they are released but
not considered graduated (Wasnik & Slavin, 1993).

The intervention begins with a ten day period referred to as "roaming around
the known." This time is spent exploring what the child already knows. The
teacher engages the student in reading and writing activities with the intent of
learning more about the student rather than teaching. In the Reading Recovery
program, the teacher and student work to develop a trusting relationship within
which the child is exposed to the feeling of success. During this time the student
learns that building on the strategies they know and trying new strategies involves
risk. This risk is both expected and valued. At this time the student's thinking and
problem solving are more important than their accuracy at pronouncing words
(Pinnell, 1989).

The lessons follow a strict framework. In each thirty minute session there are
five activities. The first activity is the reading of familiar books. The student
spends time reading aloud books she/he enjoy at their independent level to set a positive tone. For the second activity, the student reads yesterday's new book while the teacher takes a running reading record. This provides information to aid the teacher in individualizing the instruction and planning future activities. Next, the student writes a short message. The teacher helps the child compose the one or two sentence message. The student writes this message in a Reading Recovery notebook which is used to document progress. Recording the message allows the teacher to help the student construct words by analyzing sounds and representing the sounds with letters. The child also has another opportunity to recognize high frequency words by writing them. The message is read several times. The fourth activity is the teacher writing the message on a sentence strip which is cut apart to be reassembled. The purpose of the reassembly is to require the student to search for visual clues and to confirm meaning by rereading. Finally, the teacher selects a new book to build upon a skill or challenge the student. It is introduced through prereading techniques such as looking at the title and illustrations to predict the story. The child then reads the book with support where needed. Students are able to borrow books they have already had the running reading record taken on. Students are expected to read at home each night for a minimum of twenty minutes (Pinnell, 1990).
Reading Recovery is tailored to fit the needs of each individual student. Although the lesson is formatted, the program is not. It is different for each student, based on his/her individual needs. There is no sequence of skills or books to be followed. The sequence is determined by the teacher's ability to recognize the skills the student needs to develop. Success depends upon the decision making skills of the teachers, which in turn depends upon their training (Stumpf, 1990).

Teachers learn the Reading Recovery method in an apprenticeship where they teach and learn at the same time. Teachers write a diagnostic summary report of the useful responses that the child controls before they begin sessions. This report leads the teacher to design lessons that are appropriate for that student. They also write predictions of changes they would expect to see as the reader improves. This helps the teacher recognize appropriate goals for the student (Clay, 1987). During apprenticeship, the reading recovery teacher learns about the range of responses to needs that are possible. In-service programs during training prepare Reading Recovery teachers to understand reading theories and current instructional methods, to be sensitive observers of reading and writing skills and to accommodate individual learner's needs. Several times during the apprenticeship, teachers instruct behind a one-way glass while the rest of the group of Reading Recovery teachers analyze the child's reading behavior and the teacher's responses. Clinical coaching experience enable teachers to master
diagnostic techniques and teaching strategies that will improve their instruction (Boehnlien, 1987).

To deliver training to teachers there is a second level of professional needed, teacher leaders. These teacher leaders must understand every theoretical and practical aspect of the program. While they are working as teacher leaders, they are also Reading Recovery teachers. Teacher leaders are trained in a year-long course of study at a university (Stumpf, 1990).

Research has tested the training of Reading Recovery teacher as a variable for success of students. Research concludes that students who are under the guidance of Reading Recovery teachers that have gone through the year training are more successful than students whose instructors have gone through an abbreviated training program (Wasnik & Slavin, 1993).

The intervention being researched is modeled after Reading Recovery and the preceding information. It is necessary to state ways the intervention being studied has been modified. Research on the elements and the philosophy of Reading Recovery clearly relay an emphasis on teacher training. Teachers involved in this study do not claim to be Reading Recovery teachers. None of the teachers have received training from a certified Reading Recovery site. The research also reports the essential nature of early intervention. Reading Recovery is administered before students fail so the educational gap needing to be repaired
between failure and reading success is not as severe. It is also administered early to promote students reaching average reading ability and no longer needing remedial services. This is the second area the intervention being researched has been modified. Intervening teachers felt that the aspects of the program would be beneficial to students beyond first grade. Modifications in other areas such as number and length of the lessons, and lesson elements also occur. Each of these aspects will be reviewed in relationship to the research question.
Literature Review

As a child sits next to me, we read a few books from the basket of "mastered" books. After that experience with fluent reading, the child read the book that was practiced the night before. Several activities follow our reading of the new book. These activities are based on the ability of the child, and the interests of the child. Then, we choose a new book that interests the child and will provide opportunities to hone skills the child is trying to master. At the end of the lesson, the child returns to regular classroom instruction with knowledge that will be used to help the child succeed throughout the rest of the school day. The child feels confident and bright, and so do I. This is an everyday occurrence in the Reading Recovery Program.

What is Reading Recovery? Guy Su Pinnell, the leading administrator of the program in the United States, defines it in the following way:

...Reading Recovery is a tutorial for children who are having difficulty learning to read and write after approximately one year of school. It is usually described as an early intervention program; however, Reading Recovery defies a simple definition. There are layers of intersecting variables, many of which are not obvious even to those who teach in the program and/or have studied it intensively. Teaching procedures, adjustment of instruction to learners, instructional decision-making, training and self-reflection on the part of the teachers, ongoing evaluation and research all contribute to Reading Recovery's success (Pinnell, 1995, p.1).
Reynolds (1996) takes this definition of Reading Recovery and researches the success rate. The research suggests that

The Reading Recovery Program offers a model which enables each child to enter into the socialization/learning process of the community based on the language already known. This Program has had a 77 percent success rate in accelerating the transformation of nonreaders into readers (Reynolds, 1996, p. 81).

Yet, other research finds that this success rate over time declines. Center (1996) recognizes that, after a twelve month period since graduating from the program, there is a regression in overall gain. This inconsistency between research and success rate manifests itself throughout Reading Recovery research.

A literature review of Reading Recovery can be broken up into two categories. The first is the literature written about the elements of the Reading Recovery Program. The second is literature about the elements of a lesson.

Program elements is the category devised to describe features of the program including: target population, teacher training, pull-out instruction, and its emphasis on being esteem based. Lyons (1989) provides the basic program elements including: a thirty minute, daily intervention which occurs one-on-one for twelve to twenty weeks. Lyons (1989) states that the goal is for each child to reach average range for their particular instructional setting. Wasnick and Slavin
(1993) add that it is prescribed to occur at first grade, on the lowest twenty percent based on Clay's diagnostic survey. This survey is administered by certified teachers specially trained.

Research provides insight and questions into who the targeted population for this intervention is. Some report that no child in ordinary classrooms is excluded from Reading Recovery for any reason. (Clay, 1987) This statement is followed by the explanation that

Exceptions are not made for children of lower intelligence, for second language children, for children with low language skills, for children with poor motor coordination, for children who seem immature, for children who score poorly on readiness measures, or for children who have already been categorized by someone else as learning disabled (Clay, 1987, p. 60).

Others, Wasnik and Slavin (1993), report that Reading Recovery has a policy of not serving students who have already been retained in first grade and students identified for special education. Lyons (1989) wrote an article addressing Reading Recovery as an effective intervention program that can prevent mislabeling children as learning disabled. In this study a group of students labeled learning disabled were tutored by trained Reading Recovery teachers and their progress was compared to randomly selected students tutored by the same thirty teachers. The results reported that Reading Recovery can help a large
portion of faltering early readers, whether or not they are diagnosed "learning disabled." This research would support the notion that the intervention is appropriate for students labeled as learning disabled.

Wasnik and Slavin (1993) also add that trained, certified teachers are an essential element to the Reading Recovery program. Teachers must know the reading process, the learning patterns of children and the individual child in great detail (Pinnell, 1985). Important features of a successful intervention teacher are the movement away from having the poor reader dependent upon the teacher and towards teaching in such a way that the children had opportunities to teach themselves. The certified program is integral to the Reading Recovery process, not only because it equips teachers with experiences and discussions necessary to make the moment to moment decisions, but when teachers merely read about the procedures, the new ideas merge with their old practices (Clay, 1991). Consequently, the new ideas become muddled in old habits which are not a useful part of the Reading Recovery Program.

Another important issue to consider is Reading Recovery being a pull-out program. Research suggests that pull-out programs provide fragmented instructional experiences for the eligible students taken out of their regular classrooms. When this occurs supplementary instruction is not supplementary at all. The children leaving their classrooms are missing something from the
curriculum. This most often is reading and language arts activities (Allington, 1992). Students tutored in Reading Recovery receive lessons in addition to their regular classroom reading instruction (Lyons, 1989). With Reading Recovery, the intervention is an addition and not an alteration to the language program in the regular classroom (Wade, 1992).

Finally, the Reading Recovery program includes the element of being esteem-based. It begins with what the student can do and gently lifts him or her as gradually he or she moves into more difficult materials (Hill & Hale, 1991). The importance of this element is characterized in the way the intervention begins with roaming around the known. This is the first ten days of the intervention when the focus is to read and write together in a supportive fashion to build a trusting relationship and give the teacher a broader knowledge of the child (Wasnik & Slavin, 1993). It also serves to give the child a feeling of success and have the student become comfortable with risk taking (Pinnell, 1989). Roaming around the known introduces the student to the positive reinforcement and gentle guidance characteristic of instruction throughout the program.

This study uses the terms attitude and esteem to refer to the feelings the students had toward reading and school. The students feelings before and after reading intervention were addressed in this study.
In order to correctly apply the ideas and principles of the Reading Recovery Program, one must understand not only the ideas and principles but the structure of a typical lesson. Some structure within the lesson varies while the main frame of the lesson remains the same.

Professional literature reports anywhere from four to seven elements of a Reading Recovery lesson. Activities during a lesson include every aspect of the language process: listening, speaking, reading, and writing. The most basic sketch of a lesson consists of four parts: rereading familiar books, teacher analyzing reading by taking a running record of the book that went home for practice the night before, the student writing a message, and finally reading a new book. (Wasnik & Slavin, 1993). These four parts of the lesson are the constant main frame which the rest of the elements revolve around.

The most detailed information regarding elements of a lesson come from Marie Clay (1987). A lesson begins with the rereading of two or more familiar books. This sets the stage for success and practices fluency in the lessons from those stories. Next, the student rereads yesterday's new book while the teacher is taking a running record. This is followed by an activity in letter identification, usually with plastic letters on a magnetic board. Forth, the student writes a short story or sentence. Included in this part of the lesson is work with phonetic elements of words, the phonological awareness of sounds in words, and what
letters create what sound (phonemic awareness). This activity is followed by a
transfer of the sentence to a sentence strip, which is then cut apart and
reassembled. The reassembly by the student forces him or her to read for meaning.
Sixth, the new book is introduced. This can be done through predicting from the
title or by looking through the illustrations (called picture walking). Through this
step, an anticipatory set is provided for getting the reader ready for unfamiliar
vocabulary or topics. Finally, the new book is attempted with support given where
needed from the teacher.

Given these elements one must wonder, how does all this fit into a thirty
minute lesson? Do each of these elements occur in every lesson? Research did not
overtly report an answer. Research did state that there is flexibility with the lesson
where teachers can respond to the individual student. It also mentions that
variations are possible, providing there is sound rationale based on the student's

Reading Recovery has a lesson framework and a menu of possibilities.
Each option has the potential to succeed or fail, depending on its appropriate use
for a particular child, at a particular time and in a particular context. "Teachers
have to learn to be expert decision makers in order to choose appropriate books
and to select the most effective and powerful procedures for each child" (Pinnell,
Lyons, Deford, Bryk & Seltzer, 1995, p. 272). Teachers must also be aware of
what material and parts of the lesson motivates each individual child. Catering to those areas would help in motivating the student to learn.

The child remains the focus of the lesson at all times. Pinnell et al. (1995) find that

the tension between time and following the child’s interests using a range of authentic reading/writing experiences is a decision-making issue for RR teachers. These decisions are made differently every day for each child. The result is a fast-paced lesson in which the teacher focuses on real reading and writing. RR teachers do not work on ‘engaged time’ as an abstract concept. It is a byproduct of their focus on the child and is one outcome of the RR training (274).

The category of lesson elements is another area in which teacher training is stressed as a key factor to the success of the program. The key factor is the teacher’s ability to make good decisions based on observation of the student rather than on a list of actions (Pinnell, 1989). The training emphasizes teacher decision making through discussion, and debates as to why decisions were made in a lesson. Teachers view their peers teaching a lesson through a one way mirror. Each teacher is given a chance to view another and to be viewed by others. This monitoring technique is used in workshops to promote discussion and observations, and to hone teaching abilities. Through mastery of training, teachers may provide the best individual Reading Recovery program for their
Students. This training also reinforces the structure of the Reading Recovery Program and its intended application.

Reading Recovery uses every element within the two categories described above to form a complete reading program focusing on the individual child. The child engages in vast amounts of reading and writing, with guided direction from a trained teacher and a support system. This child, knowing that he or she is in a safe and respectful environment, is free to experiment with all aspects of reading in order to learn. Reading Recovery should be used as a tool to help the child at risk of failure, not used as a miracle cure for all students needing remedial tutoring in reading and writing. When discussing this model of intervention, Pinnell (1991) makes an important point:

Some children will continue to need long-term special help. But Reading Recovery does have the power to make a difference for young children at risk of failure. The program is complex, but it is showing us what can work and what it will take to make a difference for high-risk populations of children (32).

This study will research the effects of Reading Recovery on students' reading and writing abilities as well as their general attitude towards learning.

What are the benefits of Reading Recovery?
Foremost are the benefits to students. Lyons (1989) states that Reading Recovery is successful at overcoming the reading difficulties of both learning disabled and non-disabled children. Dyer (1992) adds to this the factor of preventing the psychological trauma of retaining a child in grade or labeling the child and then placing him or her in special education. Students also benefit from accelerated progress and from achieving average reading levels. Continued progress after the student graduates from the intervention adds to the benefits. (Pinnell, Fried, & Estice, 1990). Learner independence is also a benefit achieved through this intervention (Pinnell, 1990). Students also benefit from increased self esteem.

Not only are there benefits for the student but also to the school. Dyer (1992) reports that it is less expensive than first grade retention, but more expensive than typical Chapter 1 or special education services. Reading Recovery training and implementation increased the teachers general professional competence. It is a catalyst for curricular change. It reduces the diversity of literary ability within a class, therefore making classroom instruction easier. Finally, it reduces the cost and difficulty of later remediation through early intervention (Dyer, 1992).

The results of this study should indicate that a program modeled after Reading Recovery will succeed in helping the student in three ways: reading, self-
esteem, and in risk taking. The student’s reading will increase in fluency by having more sight words, and a greater ability to use a variety of reading strategies. The nature of the one-to-one experience should lead to an increase in self-esteem. With each lesson, the student has more opportunity to take risks which should eventually carry through classroom work.

When a reading intervention program modeled after Marie Clay’s Reading Recovery is implemented, what benefits occur for the student as seen by the implementing teacher and by the student?
Research Design

Sample

During the summer of 1993 a small suburban school district provided an in-service on their experience implementing an intervention program modeled after Reading Recovery. A task committee of teachers from the large suburban public school that served as the sample for this study attended. After participating in this in-service, a task group met in September to begin the process in this building.

The particular school, in which this study was conducted, was one of the two schools of choice in the district. A school of choice services kindergarten through fifth grade. Also, in a school of choice the students are not necessarily from the neighborhood around the school but rather are from a zone of the town and are admitted to the school based on a lottery system or family ties. Siblings of a current student are admitted prior to a new entrant chosen from the lottery. The school services an estimated four hundred seventy-five students. At the time of the study, six of the eighteen classroom were following a blended philosophy. Students with special education classifications were members of a regular education classroom and were provided any needed services within the class schedule and routine. A pull-out session did occur when appropriate.
The sample size of this study is eight. Of the eight students four come from the blended setting and one of the four children had a special education label at the time of the study. Each student in the sample was selected by the intervening teacher from the members of their classroom, or caseload. Factors that lead each teacher to choose the particular student were investigated in the teacher interviews and can be found in Appendix B.

The students that received reading interventions modeled after Reading Recovery during the 1992-1993 school year were each considered for this study. Of those ten students four have all the requested data collected. Four others had already begun before the research design was in place; therefore, the data collected was not complete. Two students were not included in this study because their intervention ended prior to the thesis topic being approved and the research design being in place.

The sample consists of seven boys and one girl. Of the four students with all the data collected one was in first grade (age six), two in second (both seven years old) and one in third grade (eight years old). Of the four students with only the attitude inventory and sight word list collected, three students were in first grade (each seven years old) during the intervention and one was in fourth grade (nine years old). Each student in the sample was Caucasian.
Procedure

Each of the intervention teachers were asked to perform two tests to be used as pre and post tests for the purpose of this research. The first test requested to be collected is a list of words that should be sight vocabulary, words the reader is able to read quickly from recognition, for students at the Pre-Primer, Primer, and First Grade levels, the Dolch Word List. This data will be used to provide information on the improvement of the students reading due to the growth of their sight word vocabulary.

To provide more meaningful information on the student as a reader, a second measure was included. The second piece of data requested to be collected was a running reading record. This is a record taken of the student’s reading with notation made for each miscue, omission or repetition. This will provide information regarding the improvement in terms of accuracy, fluency, the self correction rate and the cueing systems the reader used. The running record was taken twice on the same reading material. A small degree of improvement can be attributed to the passage being more familiar to the reader rather than the success of the program.
Each teacher worked independently of the others at a variety of times throughout the instructional day. Once the interventions were underway we did not meet again as a task committee.

Devising the Interview Questions for Teachers

Keeping in mind the question posed in this study, more information than individual reading improvement of each participant was needed. The question of how similar each intervention was to Reading Recovery needed to be addressed.

To gather the information to begin to respond to this question each teacher providing the intervention would be interviewed (in Appendix C). It is essential to the research question to find out how often each of Clay’s prescribed activities took place within each lesson of each teacher. It also needed to be determined if the intervention was similar in terms of frequency, and length of each session.

To include as many key elements as defined by Marie Clay, the interview questions would also need to explore: the goal each teacher had in mind for their intervention student; whether the student had the daily home support; to what degree did the student experience failure prior to the intervention; and whether the teacher began with roaming around the known.
This left one remaining element to be explored: the emphasis that is placed on the training of each intervention teacher. None of the teachers in this study were trained by a certified Reading Recovery Program. One area needing to be questioned was, in addition to the summer training, what other experience or information did the intervention teacher have that prepared them to implement the program? Did intervening teachers know the emphasis placed on certified training, if so what aspects of this training did they try to replicate.

The final question to be explored within teacher interviews was the observable growth of each student. Were teachers able to observe more participation in class discussions, increased writing, and/or reading? In asking this question it was also important to know if the teacher opinion of each student could be supported by the student’s belief as well? The need for the student’s response and perspective on the intervention was realized after the teacher interviews took place.

Each student that took part in this study was interviewed by the researcher and was asked to take an attitude inventory (in Appendix D). The attitude inventory would determine the student’s feelings toward reading prior to and after the intervention. A question was also included about their general feelings toward school. The attitude inventory modified the questions but maintained the illustrations from the Elementary Reading Attitude Survey and does not claim to
have the reliability of the original inventory. The study conducted by Traynelis-Yurek and Hansell (1993) indicates that intervention, by teachers who respond positively to student’s reading attempts, positively affects performance on reading tests and self esteem. Since Clay’s Reading Recovery program is devised to build upon students’ successes, the expectation is to see a proportional increase in both attitude and skills.

The student interviews were performed during the week of June 13, 1993. The amount of time that had elapsed between the last session and the interview ranged from one day to seven weeks.

**Method**

From February 1993 through the second week in June 1993 the participating teacher met with their students. Each teacher operated independently. Each teacher used their own resources and planned each lesson in response to student needs. No program was followed to determine a set sequence in skills covered.

Teachers arranged their own times to provide the lessons. Teacher number one was released from her afternoon teaching responsibilities through a Grant to provide the intervention to four students. These students missed portions of a
math or science lessons while in their reading sessions. Teacher number two was a consultant teacher and provided one of her intervention students their lesson during DEAR (Drop Everything And Read) time at the end of the day and volunteered her time right after school to provide lessons to the second student. Teachers three and four provided their lessons while an instructional aide oversaw the rest of the class during DEAR time right after lunch.

Each of these interventions occurred as part of the instructional support that was provided to these students and was not the only support occurring. Each parent was notified of their child's participation in the program and was requested to support the effort by reading the book that came home with the student each night. The results of these efforts are examined in Chapter Four.
Results

All of the data collected and discussed in this chapter has been consolidated into one table. This table is shown as Appendix A.

The teachers, coming from varied grade levels and schedules, were able to adjust their routines to optimize the number of lessons they were able to guide their reading intervention student. The number of lessons given to the students over the course of this study is displayed in Figure A. The number of lessons a student had ranges from 13 to 61, with an average of 24.6 lessons, a median and mode of 19.

Factors that impacted the number of sessions included the student's school attendance, other teacher responsibilities that prevented them from meeting with their intervention student, and school assemblies occurring during lesson times. Students were not made to miss field trips, assemblies or special classroom activities. This was a decision made to prevent the students from developing a negative attitude toward their intervention time. Lessons ranged from two to five times per week and from twenty to thirty-five minutes per session, see Figure B.

There were three pieces of data collected to determine the academic and attitudinal growth of the subjects. The first was a collection of the subjects sight word vocabulary. This is the term given to words the reader has memorized and
would not need to work to decode when they are read. To be a sight word the student must be able to name the word within three seconds to indicate it is truly known by sight. Many published word lists exist. The one used by each of the teachers in this study was the Dolch Basic Sight Words list. The list contains words in five categories, each category increases in difficulty from Pre-Primer, Primer, First, Second to Third. In this study, the list was only used up to and including the first grade list, which is one hundred and thirty-three words. The administering of this test stops when the subject has been unable to correctly read ten words in a row.

Seven of the eight subjects had this data collected. Figure C illustrates this data. The subject that did not have this collected was the fourth grade student and no reason was given as to why this subject’s data was incomplete. The average of the remaining students for the pre-test was 47.6. The average of the same group of students for the post-test was 90. The first grade subjects increased in sight words from pre to post test by 36.3 words on the average. There were two second grade subjects which increased by an average of 49.5 words, and the third grade subject increased by thirteen words. Due to the sample size, it is difficult to compare data between grade levels, but it is interesting that each of the subjects in first grade made more progress than either the second or the third grade subjects on this isolated measure.
The next piece of data was used to determine academic growth, a running reading record. A running record is a log of a reader’s accuracy while reading. It is taken by the teacher. Each miscue, error, is noted with a shorthand. Substitutions, insertions and omission are each considered a miscue. If a miscue is corrected by the reader that is noted as a self correction. This is important information because it illustrates that the reader is aware of his/her reading, realizes that what was said did not match the messages he/she was receiving from one of his/her cueing systems (syntax, semantics or graphophonic) and was able to correct his/her reading. Repetitions are not counted as a miscue but are documented. The same piece of literature was used for both the pre and post-test. At the first grade level, the passage was an excerpt from a segment of a chapter, called “The Garden”, from Arnold Lobel’s *Frog And Toad* series. The second grade passage was from a Ready to Read book, by Anne F. Rockwell, entitled *The Story Snail*. The third grade subject also used the second grade passage.

This information is shown in Figure D. This information was not collected on four of the eight subjects. Those four subjects were already halfway through their interventions prior to the design of this study and a true pre, post-test situation was not possible.
The data was reported in terms of an accuracy rate. The accuracy rate is determined by subtracting the number of errors from the total number of words in the passage to find the number of correct responses. The number of correct responses is then divided by the number of words in the passage to determine the accuracy rate. Of the four remaining subjects the student ranges from an 89 percent growth to an 11 percent growth in accuracy. The average growth was 39 percent. The 89 percent growth in accuracy was due to the fact that on the first day of intervention the subject was not able to attempt the passage at all.

The rate of self corrections was also collected. This is the number of miscues the subject corrected while reading. Refer to Figure D. On the pre-test of the four students, one had no self correction rate because they were unable to attempt the passage, the other three scores were a one out of twenty-nine, one out of ten and a one out of every four errors were corrected. The better the reader the higher the rate of self correction. As a post-test the four scores were two out of three, one out of two, one out of three and one out of four. This is a marked improvement.

The final piece of data collected was the attitude inventory (see Appendix D). This inventory was collected on all eight students. Each student was read a series of questions and asked to circle the illustration that most represented their feelings about each statement. Figure E displays the results from the attitude
inventory. Prior to beginning the inventory the illustrations were discussed so that each student was interpreting the illustrations to represent the same feeling. The odd questions referred to feelings about reading before their reading intervention, the even questions referred to their feelings now. The odd and the even questions were then tallied. Five points were given for the happiest response, four for the next happiest, three for the indifferent, two for a somewhat sad and one for the most sad. The higher the score, the better their feeling about reading. The highest score is a thirty-five.

The lowest pre-test score was a fifteen, the average pre-test score was a 19.3, the mode was 15 and 22 and the median was 17 and 22. The lowest post-test score was a 24, the average post-test score was a 28.4. The mode was 27 and the median was 27 and 29. The growth in individual attitudes ranged from zero to a fifteen point increase, with an average increase of 9.1. The subject that had the Attitude Inventory Score that remained the same indicated during the interview that she was upset that her time with her intervention teacher was over; therefore, she choose the sad illustrations for the questions referring to her attitude now. This student’s lack of attitudinal improvement was an unexpected result.

In each of these measures the students regardless of grade level improved. It cannot be stated that the more sessions the greater the improvement. It can not be said that the earlier the intervention occurred in the subject’s school career the
greater the improvement. It also can not be said that the students being taught by the teacher with the most experience made the most improvement. The same student did not make the most improvement in each area but rather one improved the most in sight words and another improved in both the attitude inventory and the running record. It can be said that the greater the improvement in the running record the greater the improvement in attitude.

The teachers also were interviewed to determine the success of student and whether the improvement in attitude was isolated to the intervention setting, or if it carried over into classroom participation. Teachers were asked if each subject participated in class more after the intervention. They were also asked if the intervention helped their particular subject(s) to develop a more positive attitude toward reading, and writing. This data was collected for every subject. Of the eight students, six of the teachers reported that the subject participated more in their regular classroom setting. They defined participating as raising their hand to share answers, following through with directions for independent activities with minimal assistance, and being a productive member of a cooperative group. Two subjects had not reported change in their participation during or after intervention. One of these students was in first grade the other in second. Of the eight students, seven were reported to have a notable increase in their attitude toward reading. Seven were reported to have a notable increase in their attitude in writing. The
student that did not show a more favorable attitude toward writing was in the second grade, had the most sessions and reported a personal improvement in attitude toward writing in the inventory. The subject that did not show an improvement on the attitude inventory was also one of the two students reported by teachers to not have shown an increase in classroom participation.

The last area to be compared is the issue regarding teacher training. In the Reading Recovery Program to be a certified Reading Recovery Teacher there is a year long training at an official training site which involves not only knowledge of the program philosophy, and lessons but also the application of this knowledge by tutoring a student while being mentored by an experienced Teacher Trainer. This training year is followed by a year of drop-in observations by a Teacher Trainer.

None of the teachers in this study were certified Reading Recovery Teachers. During the interview they were questioned about some of the important elements of genuine Reading Recovery training. The teachers were asked where they received the best information about the Reading Recovery program. Teacher C gained her experience from books about the topic and discussions with colleagues. Teachers A, B, and D each accrued their knowledge from an in-service, reading the Marie Clay books, professional literature, discussions with colleagues, and Teacher B through workshops offered by the district. Teacher D also visited a district, that had a successful intervention program modeled after
Reading Recovery running for several years, to observe a lesson and see their documentation techniques.

Literature suggests that an essential element of the RR training is the observation of a session by fellow Reading Recovery teachers followed by discussions around the choices made throughout the lesson. Each of the teachers in this study were asked if an observation of a lesson occurred and if discussions transpired as a result. Teacher C was observed by both the principal of the school, and a parent of one of the subjects. Neither observation resulted in discussions around why choices were made throughout the lesson. Teachers B and D were not observed. Teacher A was observed but again no discussion resulted from the observation.

It is the opinion of the researcher that the teachers in this study understood the written literature and were well versed in the prescriptions of a lesson prior to embarking of their model of intervention. Understanding the program well is not enough to make a good Reading Recovery teacher in the eyes of the designer of the intervention. Marie Clay states:

The best person to help a child with reading difficulties is a trained teacher who has become a master teacher of reading and who has been trained as a specialist in reading problems (1993, p.14).

In addition to this research on the issue of training makes clear that when a teacher merely reads about the procedures the new ideas merge with old practices to dilute
the effectiveness. Another point made by Clay is that without the proper training the movement away from having the poor reader dependent on the teacher and towards teaching in such a way that the child has many opportunities to teach themselves, may not occur as soon or at all (Clay, 1991). There is an undeniable gap in expertise and learning from not being observed or having dialog as a result from observations.

The purpose of this study is to determine what benefits occurred to the subject when an intervention modeled after Reading Recovery occurred. This chapter has determined that there were benefits to each subject in both the subject's opinion and intervening teacher's opinion. It has also been established that although this was not a certified Reading Recovery program the lesson elements were followed to various degrees among each intervention and were modeled after literature's representation of Reading Recovery.
Implications of the Results

The results of this study will be discussed in three areas. Each area is a key feature of the authentic Reading Recovery Program. The three elements include: the intervention taking place one-on-one, the training of the teachers, and the success of the program for students beyond first grade.

The issues relating to the first element revolve around the benefits of this setting. In this study each of the subjects made progress in both measures of skill, number of sight words and reading accuracy and fluency. All but one made progress in attitude. A study has been done by Wasnik and Slavin (1993) that substantiates that progress is not only due to the one-on-one nature of the program but is also due to the elements of this intervention. The Wasnik and Slavin study included a control group. A control group is an element missing from this study. It would have been interesting to have had the comparisons a control group would have provided. A control group was discussed at the building level but was ruled out because each student displaying reading difficulties similar to those included in this study were receiving some type of intervention.

Teacher A with student 1 demonstrated most closely the principles and ideals of Marie Clay. With this in mind, teacher A with student 1 is the only participant in this study that came close to accomplishing the principles of Clay, in
terms of lesson duration and content. However, teacher A’s training and guidance differs from those outlined by Clay.

The second element includes the training of teachers. The teachers that provided the interventions in this study had a wide range of teaching experience, and were similar in their knowledge and training about Reading Recovery. Although training was similar there were significant gaps in the training described by Marie Clay and what was experienced by the teachers in this study. One such area is the gap in expertise and learning, from not being observed or having dialog result from observations of a session. The understandings and decision making of each of the teachers could have been amplified had observations and critical discussions occurred. Also, it was each of these teachers’ first experiences providing the intervention. In certified training, the teachers are guided through by a trained teacher during their first attempt at intervention. The teachers in this study lacked any formal guidance.

Since training in Reading Recovery is similar, teaching experience will be the variable explored. It was one of the teacher’s (teacher A’s) first year teaching, a second (teacher B) had seven years of experience, the third (teacher D) fifteen years, and the fourth (teacher C) twenty-two years. The teacher with the most experience did provide the intervention for the two subjects that showed the most growth in sight words. They were not the students that showed the most
improvement in attitude and did not have data reported for reading accuracy and fluency. The teacher with seven years experience taught the subject that made the most growth in reading accuracy and fluency. This was also the subject that showed the most growth in attitude. The students that were served in this study were among the most needy in their class. The growth that occurred for each student was marked. This is the progress made when good teachers are trying to do their best within the means available. If a growth of ninety-five sight words and an eighty-nine percent growth in reading fluency are possible by teachers applying what they read, hypothesize what the results could have been if certified Reading Recovery Training would have taken place. Teachers must believe that training is essential. Otherwise, one would be supporting the notion that training is not necessary to be an effective teacher.

The third element revolves around success of participants in the Reading Recovery program after first grade. The Reading Recovery Program is prescribed to occur at first grade. First grade is the optimal time because, at this point in a student’s career, they have not experienced failure and the intervention is more proactive than remedial. In this study, only four of the students were in first grade. The average growth of the subjects in first grade was 57.8 in sight words, eleven percent in reading accuracy and fluency and 7.3 in attitude. The two subjects in second grade showed an average growth of 50 in sight words, sixty-three percent
in reading accuracy and fluency and 13.5 in attitude. The third grade student grew by 13 sight words, nineteen percent in reading, and 9 in attitude. The fourth grade student had improvement in attitude, which was 8. Based on this study subjects in the first grade made the most growth in sight words but students in the second grade made the most growth in reading accuracy and fluency, and in attitude. It is also true that beyond second grade the improvement in all areas decreased each additional year.

It would have been more credible had there been the same number of subjects at each grade level. The researcher in this case included all subjects that received an intervention modeled after Reading Recovery that occurred within the time parameters of the research. There were no means for the researcher to include a larger, more evenly distributed sample size. The documented growth in terms of reading accuracy and fluency are also increased slightly by the fact that it is not the subjects first time reading the material. Regardless of improvement due to the intervention, it would be expected that a second reading of the same material would be more fluent than the first. The alternative to using the same passage twice would have taken away some of the ability to compare pretest and post-test results. Then, the researcher would have had to create some way to determine whether passages had the same level of difficulty. Devising the best
pretests and post-tests to determine growth in skill areas is an area that could be improved with further research.

Pikulski (1994) brings to one’s attention that,

Enormous amounts are spent annually in efforts to remediate reading problems, or so-called “learning disabilities,” while a fraction of that funding is expended on preventing those problems. This focus on correction rather than prevention continues in spite of an impressive and growing body of authoritative opinion and research evidence which suggests that reading failure is preventable for all but a very small percentage of children (p.30).

One such way funding can be used to prevent and intervene rather than to remediate is to invest in the impressive success rate and program Marie Clay has devised and implement it. The only way to match effectiveness is to trust the research compiled that supports Clay’s belief that proper certified training is essential to implement her program fully and expect its documented results.

Pinnell (1990), in Educational Leadership, concludes that

...while Reading Recovery might be part of an answer to problems of literacy, it is not the answer. The program does one thing well; it provides the experience and skilled teaching to guarantee that most low-achieving children learn to read and write and catch up with their grade level peers. But Reading Recovery cannot be the only positive school experience that a child receives. Children may learn to read through Reading Recovery, but they do not turn into different children, even though many adopt a much more positive attitude toward school. Poor children are still poor. Highly mobile families still move. Many have family problems. Some children’s work habits are still not very good even though their reading ability has improved. Some continue to be discipline problems (p. 20).
Since this study was conducted during the 1993-1994 school year and the documentation is being completed during the 1997-1998 school year, additional information about the long term effects of the intervention are able to be included. Of the eight subjects in this study four moved out of the district the following year. One of the subjects was already labeled for special education services and another became labeled the year following participation in the study. One of the other students continued to need reading support throughout his/her elementary education. The final student received some form of reading intervention for two more school years and then bridged the gap in reading performance to no longer need services.

Was participation in a program modeled after Reading Recovery instrumental in changing these students reading and writing habits over time? This question may only be answered with further longitudinal research.
## Appendix A

### Raw Data

<table>
<thead>
<tr>
<th>Teacher/Student</th>
<th>Grade Level</th>
<th>Word List (Pre)</th>
<th>Word List (Post)</th>
<th>Running Record (Pre)</th>
<th>Running Record (Post)</th>
<th>Attitude Inventory (Pre)</th>
<th>Attitude Inventory (Post)</th>
<th>No. of Lessons</th>
</tr>
</thead>
<tbody>
<tr>
<td>A/1</td>
<td>2</td>
<td>47/133</td>
<td>105/133</td>
<td>58% 1/29 sc*</td>
<td>95% 2/3sc</td>
<td>15</td>
<td>27</td>
<td>61</td>
</tr>
<tr>
<td>D/2</td>
<td>3</td>
<td>96/133</td>
<td>109/133</td>
<td>73% 1/10sc</td>
<td>92% 1/4sc</td>
<td>15</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>D/3</td>
<td>1</td>
<td>96/133</td>
<td>123/133</td>
<td>87% 1/4sc</td>
<td>98% 1/2sc</td>
<td>25</td>
<td>31</td>
<td>15</td>
</tr>
<tr>
<td>B/4</td>
<td>2</td>
<td>70/133</td>
<td>111/133</td>
<td>0% no sc</td>
<td>89% 1/3 sc</td>
<td>14</td>
<td>29</td>
<td>19</td>
</tr>
<tr>
<td>C/5</td>
<td>4</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>22</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>C/6</td>
<td>2</td>
<td>11/92</td>
<td>31/40</td>
<td>--</td>
<td>--</td>
<td>22</td>
<td>35</td>
<td>33</td>
</tr>
<tr>
<td>C/7</td>
<td>2</td>
<td>28/133</td>
<td>123/133</td>
<td>--</td>
<td>--</td>
<td>17</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>C/8</td>
<td>2</td>
<td>33/133</td>
<td>103/133</td>
<td>--</td>
<td>--</td>
<td>24</td>
<td>24</td>
<td>15</td>
</tr>
</tbody>
</table>

* data not collected  

* sc = self correct during reading of passage
Appendix B

Teacher Interview Concerning the Growth of Student

Information Checklist:

Teacher Name__________________________
Student Name__________________________ Grade____

1. Do you feel Reading Intervention helped the student develop a positive feeling towards reading?
   Yes[ ] No [ ]

2. Do you feel Reading Intervention helped the student develop a positive attitude towards writing?
   Yes[ ] No [ ]

3. Does the student participate in class more now?
   Yes[ ] No [ ]

4. How does the student participate more in class?
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________

5. Any other comments or observations:
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
Appendix C

Teacher Interview Concerning the Intervention Program

Information Checklist:
Teacher Name ___________________ Student Name ___________________ Grade ___________________

1. You worked with your intervention student ____________________ minutes a day, ____________________ days a week.

2. How often a week do you do each of the steps Marie Clay prescribes in her intervention?

3. Was the goal of your intervention to have the student reach average performance for your classroom?
   Yes [ ] No [ ] If no, please specify your goal ____________________________

4. Which of the factors did you consider in choosing your intervention student:
   [ ] Will have support from home  [ ] motivation of the student
   [ ] lowest 20% of your class based on reading performance
   other, please specify ____________________________

5. Does your intervention student get the recommended 20 minutes daily reading support from home?
   Yes [ ] No [ ]

6. Did the student experience enough failure in reading to develop a negative attitude before you began the intervention?
   Yes [ ] No [ ]

7. Did you begin your intervention with “Roaming Around the Known?”
   Yes [ ] No [ ]

8. Where did you get the best information about the Reading Recovery program?
   [ ] In-service
   [ ] Professional Journals
   [ ] Books, Please specify ____________________________________________.
   [ ] Other, Please specify ____________________________________________.

9. Have you had a colleague observe you during an intervention session?
   Yes [ ] No [ ]

10. As a result, did you discuss process or choices made during the observed session?
    Yes [ ] No [ ]
ATTITUDE INVENTORY

NAME _______________  GRADE ____  SCHOOL ____

SAMPLE: How do you feel when someone gives you a peanut butter and jelly sandwich?

1. Before Reading Intervention, how did you feel when your teacher read a story out loud?

2. Now, how do you feel when your teacher reads a story out loud?

3. Before Reading Intervention, how did you feel about reading books for fun at home?

Reading - 22
4. Now, how do you feel about reading books for fun at home?

5. Before Reading Intervention, how did you feel about how well you could read?

6. Now, how do you feel about how well you can read?

7. Before Reading Intervention, how did you feel when you came to a new word while reading?
### Figure A

**Characteristics of Lessons**

<table>
<thead>
<tr>
<th>Instructor</th>
<th>n</th>
<th>Number of Lessons</th>
<th>Ratio</th>
<th>Percent</th>
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<tr>
<td>Teacher A</td>
<td>1</td>
<td>61/60*</td>
<td>1:1</td>
<td>100%</td>
</tr>
<tr>
<td>Teacher B</td>
<td>1</td>
<td>19/60</td>
<td>4:15</td>
<td>26.6%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>4</td>
<td>22/60</td>
<td>11:30</td>
<td>36.6%</td>
</tr>
<tr>
<td>Teacher D</td>
<td>2</td>
<td>14/60</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* Based on the number of lessons required in Reading Recovery as specified by Clay.
Figure B

Frequency of Sessions*

<table>
<thead>
<tr>
<th>Instructor</th>
<th>n</th>
<th>Average No./Week Days**</th>
<th>Length of Each Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher A</td>
<td>1</td>
<td>5/5 for 12 weeks</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Teacher B</td>
<td>1</td>
<td>3/5 for 6 weeks</td>
<td>20-35 minutes</td>
</tr>
<tr>
<td>Teacher C</td>
<td>4</td>
<td>4/5 for 3-8.5 weeks</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Teacher D</td>
<td>2</td>
<td>2/5 for 7 weeks</td>
<td>35 minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3/5 for 5 weeks</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

* Clay recommends daily sessions, lasting 30 minutes each for the duration of a twelve week program.

** Based on the number of days in a usual school week in the United States
### Student’s Word Identification Skills

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Student</th>
<th>Word List (Pretest)</th>
<th>Word List (Post-test)</th>
<th>% of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher A</td>
<td>Student 1</td>
<td>35.3%*</td>
<td>78.9%</td>
<td>43.6%</td>
</tr>
<tr>
<td>Teacher D</td>
<td>Student 2</td>
<td>72.2%</td>
<td>82.0%</td>
<td>9.8%</td>
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<tr>
<td>Teacher D</td>
<td>Student 3</td>
<td>72.2%</td>
<td>92.5%</td>
<td>20.3%</td>
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<td>Teacher B</td>
<td>Student 4</td>
<td>52.6%</td>
<td>83.5%</td>
<td>30.9%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>Student 5</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Teacher C</td>
<td>Student 6</td>
<td>12.0%</td>
<td>46.9%</td>
<td>34.9%</td>
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<td>Teacher C</td>
<td>Student 7</td>
<td>21.1%</td>
<td>92.5%</td>
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<tr>
<td>Teacher C</td>
<td>Student 8</td>
<td>24.8%</td>
<td>77.4%</td>
<td>52.6%</td>
</tr>
</tbody>
</table>

* Based on the number of correct answers from the overall number of words given to be identified. All percentages are rounded to the nearest tenth.

** Teacher C did not conduct this test on Student 5.
**Student's Fluency and Reading Skills**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Student</th>
<th>Student Record (Pretest)</th>
<th>Running Record (Post-test)</th>
<th>% of Growth</th>
<th>Self-Correct (Pretest)</th>
<th>Self-Correct (Post-test)</th>
<th>% of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher A</td>
<td>Student 1</td>
<td>58%</td>
<td>95%</td>
<td>37%</td>
<td>0%</td>
<td>66.6%</td>
<td>66.6%</td>
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<tr>
<td>Teacher D</td>
<td>Student 2</td>
<td>73%</td>
<td>92%</td>
<td>19%</td>
<td>10%</td>
<td>25%</td>
<td>15%</td>
</tr>
<tr>
<td>Teacher D</td>
<td>Student 3</td>
<td>87%</td>
<td>98%</td>
<td>11%</td>
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<td>50%</td>
<td>25%</td>
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<tr>
<td>Teacher B</td>
<td>Student 4</td>
<td>0%</td>
<td>89%</td>
<td>89%</td>
<td>0%</td>
<td>66.6%</td>
<td>66.6%</td>
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</tbody>
</table>

* Teacher C did not conduct the Running Record Pre or Post-tests. Consequently, the data for the frequency of self-correcting, on students 5, 6, 7 and 8, was not gathered. Therefore, students 5, 6, 7, and 8 were not considered in this aspect of the study.
**Figure E**

**Student's Attitude Towards Reading**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Student</th>
<th>Attitude Inventory (Pretest)</th>
<th>Attitude Inventory (Post-test)</th>
<th>% of Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher A</td>
<td>1</td>
<td>42.9%</td>
<td>77.1%</td>
<td>34.2%</td>
</tr>
<tr>
<td>Teacher D</td>
<td>2</td>
<td>42.9%</td>
<td>68.6%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Teacher D</td>
<td>3</td>
<td>71.4%</td>
<td>88.6%</td>
<td>17.2%</td>
</tr>
<tr>
<td>Teacher B</td>
<td>4</td>
<td>40.0%</td>
<td>82.9%</td>
<td>42.9%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>5</td>
<td>62.9%</td>
<td>85.7%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>6</td>
<td>62.9%</td>
<td>100%</td>
<td>37.1%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>7</td>
<td>48.6%</td>
<td>77.1%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Teacher C</td>
<td>8</td>
<td>68.6%</td>
<td>68.6%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
References


