

THE EFFECTIVENESS OF READING RECOVERY LITERACY GROUPS ON FIRST
GRADE STUDENTS

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ABSTRACT

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The purpose of this study was to determine whether Reading Recovery Literacy Circles improved students' literacy skills. Students in a first-grade classroom were given a battery of tests in September. In October, the students were placed into small literacy groups. The groups followed the Reading Recovery intervention program format, adapted for small groups. Eight weeks of intervention passed and the students were tested using the same battery of tests to determine whether or not reading gains were made. The test scores were compared to another classroom of first grade students that did not participate in the literacy circles. The results indicated that there were no significant differences between the two groups.

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It is my hope that all children get all of the individualized education that they need. And that every child not only learns to read, but learns to love reading.

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CHAPTER I. INTRODUCTION

According to Harris and Hodges (1995), Reading Recovery is defined as “a registered trademark for an early intervention program developed by Clay for use with children at risk in reading progress after one year of schooling” (p. 212). Reading Recovery has been used in 10,600 schools in the United States. Every year 150,000 students, for a total of over 1 million students since 1984, have been provided instruction from a Reading Recovery teacher (Hoff, 2002).

Reading Recovery was designed to be a one on one intervention program for students at risk of reading failure. If a child qualifies for the instruction, he/she will receive 30 minutes of daily instruction from a trained teacher for 12-20 weeks. Each daily lesson consists of the following seven components:

1. Child rereads familiar books at or slightly below current reading level.
2. Child rereads a book introduced during the previous day's lesson. The teacher completes a running record to determine how well the child can read without teacher assistance.
3. Child looks at print to decipher basic principles of how words work.
4. Child writes one to three sentences with teacher assistance.
5. Child cuts up story and puts it back together after story is completed.
6. Teacher introduces a new book.
7. Child attempts to read as much of the new, more difficult book as possible with the help of the teacher. (Clay, 1993)

After the 12-20 weeks of intervention, the student can be dismissed or, if the student is still having difficulty, his/her teachers can decide to continue with the intervention.

Statement of the Problem

Research (Linan-Thompson & Hickman-Davis, 2002; O'Connor & Simic, 2002) supports the notion that struggling readers need supplemental reading instruction as an intervention measure before the gap between good readers and struggling readers becomes larger. One such intervention program that has repeatedly been reported as successful in helping to bridge the gap is the Reading Recovery Program (Clay, 1993). Reading Recovery has been touted for well over a decade as an extremely successful and effective reading intervention program. There is one problem associated with Reading Recovery and that is the cost of implementation to a school district. Because it is a one-on-one program, it is also a very costly intervention program. The problem most schools face is that the specialized training needed by Reading Recovery teachers, along with the limited number of students who can be served by each teacher makes Reading Recovery cost prohibitive for some school districts.

Research Questions

For the purpose of this study, the popular intervention strategy, Reading Recovery (Clay, 1993), was adapted for use with small groups of students who had similar reading levels. The reading teacher, who was being trained as a Reading Recovery teacher, led the group of teachers through the intervention. In this study, not only did the lowest students receive the supplemental, small group support of the literacy groups, but the highest groups also received the same instruction. Therefore, the purpose of this investigation was to answer the question, "Do students involved in Reading Recovery Literacy Groups perform better than those who are not?" and "Does participation in Reading Recovery Literacy Groups impact reading performance?"

Rationale

It was necessary to conduct this study to determine whether the four-time weekly small literacy groups achieve the goal of raising first grade literacy levels and fluency. The results of this study may be used to determine whether literacy circles should be implemented into other first grade classrooms in the school. If first graders involved in the Reading Recovery Literacy Groups performed better than students who did not receive the intervention, then adapting the Reading Recovery program (Clay, 1993) into small group intervention will have merit to have more teachers trained and may also be implemented into the kindergarten and second grade classrooms. It may also be used by more schools who find it more cost effective to use the Reading Recovery intervention program for small groups.

Definition of Terms

The Literacy Dictionary (Harris & Hodges, 1995) defines *Reading Recovery* as: “a registered trademark for an early intervention program developed by Clay for use with children at risk in reading process after one year of schooling” (p. 212).

Fluency, according to Harris and Hodges (1995), is defined as “freedom from word-identification problems that might hinder comprehension in silent reading or the expression of ideas in oral reading; automaticity” (p. 85).

Leveled books, are books that have been designed to be read by students at certain reading levels. The books used in this study were leveled using the Reading Recovery leveling book list. The reading specialist in the building leveled each book according to the book list.

Limitations

One limitation of this study was the fact that there were days that the literacy groups did not meet because of time restrictions, assemblies, and other various infractions. The fact that

such a small number of students were involved in this study was also a limitation; different results could be obtained if the class size was larger or if the students were from different socioeconomic or racial backgrounds. The way a teacher is trained to deliver services, the individual teaching techniques, and enthusiasm of individual teachers can also be a limitation. Furthermore, if different books, other than the books listed in Appendix A, were used different statistical results may present themselves.

CHAPTER II. REVIEW OF LITERATURE

Many different literacy programs have been instituted in classrooms throughout the United States in an attempt to find programs that are successful in helping students to become readers. One of the most frequently cited, as well as popular, intervention programs used to help students become better readers is Reading Recovery (Clay, 1993). The present study was designed to determine whether adapting Reading Recovery, by adding Literacy Groups, in first grade classroom instruction in Northwest Ohio would enhance reading performance. The review of research examines Reading Recovery (Clay, 1993) and the research studies that have been conducted that have explored Reading Recovery. The second part of Chapter II will focus on Reading Recovery literacy groups and research related to the use of literacy groups to improve reading performance.

Reading Recovery

Marie Clay (1993) developed Reading Recovery, a literacy program that focuses on and identifies the lowest 20% of a particular first grade class. According to Morris, Perney, and Tyner (2000), “the goal is to help the children catch up with the ‘middle of the class’ in reading by the end of the first grade year” (p. 681). O’Connor and Simic (2002) define Reading Recovery as an early intervention program developed to meet the individual child’s needs based on his/her strengths. When a student is identified as a low reader, a trained professional will assess the student using the *Observation Survey* (Clay, 2002). Teachers in Reading Recovery focus, for 30 minutes a day, on story reading and writing sentences to improve the strategies needed to be a good reader. Reading Recovery consists of lessons taught by a specially trained reading teacher. There are seven components in each lesson designed to improve reading and writing skills:

1. Child rereads familiar books at or slightly below current reading level.
2. Child rereads a book introduced during the previous day's lesson. The teacher completes a running record to determine how well the child can read without teacher assistance.
3. Child looks at print to decipher basic principles of how words work.
4. Child writes one to three sentences with teacher assistance.
5. Child cuts up story and puts it back together after story is completed.
6. Teacher introduces a new book.
7. Child attempts to read as much of the new, more difficult book as possible with the help of the teacher. (Clay, 1993, p. 14)

Reading Recovery was developed by Clay (1993) to answer the question: "How can teachers provide a second chance for young children who have not responded to the reading program in their first year at school" (p. 192). The daily instruction of Reading Recovery stems from the thought that if a child cannot remember skills from day to day, he/she can still be helped by the teacher prompting him/her through responses given in earlier lessons (Clay). According to Clay, "when daily, intensive programming is not achieved the quality of teaching and the outcomes of the program are seriously affected" (p. 9). It is Clay's thought that the short lessons, as described above, allow learning to flow from day to day.

When a child gains certain strategies for reading through the Reading Recovery Program the/she may be discontinued from the program. Clay (2002) outlines these behaviors for dismissal:

1. Directional Movement- the child will have control over and be able to check his/her behavior.

2. One-to one matching- the child will be able to control one to one matching of spoken to written word.
3. Self monitoring- the child notices errors made while reading, but does not correct them. The child can reassemble a cut up story.
4. Cross checking- the child notices discrepancies in their response by cross checking one kind of information with a different kind of information.
5. Use of multiple cue sources- on self correction behavior it is sometimes clear that the child is using meaning, structure, visual cues and a sense of how words are written, to achieve a match across all sources of cues.
6. Self correction- effective self correction follows from using self monitoring, searching for cues, and cross checking information. However, even unsuccessful attempts at self correction are indicators that a child is aware these activities can be helpful. (pp. 58-59)

Although no exact outline for discontinuing is given, it is suggested that the child being discontinued should be reading at the same level as his/her average peers (Clay, 2002). It is also recommended that the child be able to write a two to three sentences about what he/she has read. If the student's classroom teacher and the Reading Recovery teacher believe that the child is ready for dismissal, the *Observation Survey* should be administered by an independent examiner and compared to the test results from the *Observation Survey* given before the program began. (Clay). The *Observation Survey* consists of the following six sub tests:

1. A running record- used to determine what level the child is currently reading at

2. Letter identification- the student is given a jumbled list of capital letters and lower case letters and they must identify the letter by name, sound, or a word that starts with the letter
3. Concepts about print- the student is given a book and asked questions about the text in the book
4. Word test- the student is given a list of 20 words to read
5. Writing vocabulary- the student is asked to write all the words that they know
6. Hearing and recording sounds in words- the examiner dictates a story and the student writes. (Clay, 2002)

If the child is not ready to discontinue after the full program is delivered it is suggested that the team decide what to do with the child. The child may need to continue the regular program or maybe only meet two to three times a week to focuses on the skills with which he/she continues to struggle. If the child is discontinued form the program, Clay (2002) recommends that the child be monitored in the classroom over the next three years. According to Clay, “A refresher course of individual instruction for quite a short period should be most helpful for a ‘recovered’ child who has begun to slip behind his classmates” (p. 59)

O’Connor and Simic (2002) explain that Reading Recovery supplements regular classroom literacy instruction, with a typical program lasting for 12-20 weeks. According to Morris, Perney and Tyner (2000), Reading Recovery focuses on training 10 teachers simultaneously throughout a one-year period. During the training, the teachers are monitored. Usually, the teachers are the reading specialists in their building. The training for a Reading Recovery teacher is extensive.

According to a reply from Marie Clay, the founder of Reading Recovery, and Barbara Watson, New Zealand's National Reading Recovery Coordinator, published in an article by Stumpf-Jongsma (1990):

Teachers learn in an apprentice type program, for they are teaching and learning at the same time. They are teachers in a school with some delegation of time to this special work. They attend regular sessions with a teacher leader who is responsible for their training. Perhaps this should be called retraining because Reading Recovery introduces many new ways of looking at literacy learning. That is what distinguishes this training from traditional approaches. There are new things for the most experienced reading teachers to think about and new ways of working to learn to maximize what children are trying to do. Rethinking and challenging what they do have proved challenging to many experienced professionals. (p. 272)

Stumpf-Jongsma notes that the training takes an entire year and can be carried out within a school, during out-of-school training, or through universities.

Reading Recovery Research

Research has been conducted to investigate the effectiveness of the Reading Recovery Program. Iverson and Tunmer (1993) completed a study that included three different groups of 32 students each: a standard Reading Recovery group, a modified Reading Recovery Group and a standard intervention group. Two control groups of 32 children were also included in the study. The standard Reading Recovery group received a standard Reading Recovery lesson. The modified Reading Recovery group received instruction in letter-phoneme patterns instead of the Letter Identification section of the Reading Recovery program. Finally the standard intervention group was given interventions that were normally available to at-risk students. The standard

intervention services were funded by Chapter One or Literacy, a state supported program. The support was administered in small groups in and out side of the classroom (depending on the school) for at least four times a week.

All students were administered the Diagnostic Survey developed by Clay in 1985 (Iverson & Tunmer, 1993). The Diagnostic Survey consisted of six subtests:

1. Letter Identification subtest- the child identifies, by sound or name, 26 upper and 28 lowercase letters.
2. Concepts About Print- tests the child's understanding of the printed language.
3. Word Recognition- the child reads a list of 15 words.
4. Writing Vocabulary- the child writes as many words as they can in 10 minutes.
5. The Dictation Test- the child is read a short passage slowly so that they can write the words down.
6. Running Record- a child read a book while the teacher records the child's mistakes to determine the level at which a child reads.

Iverson and Tunmer (1993) reported that the students were also administered the *Dolch Word Recognition Test* and a series of phonological processing measures. The Dolch Word list consists of 220 high frequency sight words. At the first assessment, the students were only given the grade one and two lists (179 words total) and at the end of the year the students were given all 220 words. The phonological processing measures consisted of two phonological awareness tests (Yopp-Singer phoneme segmentation test) and one pseudoword decoding test. During the phonological segmentation test the students were asked to articulate the sounds of a word separately, in order. The second phoneme test was the phoneme deletion test in which the tester gave the students 30 test items with either the initial, medial or final phoneme was deleted.

During the pseudoword test, the child was asked to read “funny”, or made up words, to determine if he/she understood the rules of the English orthography.

Whenever a student in either of the Reading Recovery groups was ready to be discontinued, all of the above tests were administered again (Iverson & Tunmer, 1993). The tests were also administered to the standard intervention groups and to the control groups. When comparing the two Reading Recovery groups, Iverson and Tunmer reported, “the results show that the two groups preformed at very similar levels at discontinuation” (p. 119). The results also indicated that the children involved in the Reading Recovery groups out performed the students in the standard intervention group. The results also indicated that the students in the Reading Recovery groups performed as well as the classroom control group. And, in the case of the phonological awareness measures, the Reading Recovery group scored higher than the classroom control group. The authors also note that the Reading Recovery group’s post intervention scores on the Diagnostic test were well within the average range for their ages.

Center, Wheldall, Freeman, Outhred, and McNaught (1995) researched Reading Recovery in 10 schools in New South Whales. In each of the 10 schools, the first grade teacher, along with the kindergarten teacher from the previous year, identified 20 students as high risk for reading failure. The students were given the *Diagnostic Survey* and the students who received the lowest scores were selected to participate in the research project. Eight of the 12 students from each school were randomly placed into the experimental and control group. The four remaining students were placed into a holding group to replace the Reading Recovery students as they were discontinued; however, these students were not included in the study.

After the placement of all of the students, the groups were labeled as groups one, group two, and group three (Center, Wheldall, Freeman, Outhred, & McNaught, 1995). Group one

consisted of 31 low progress students who received Reading Recovery after the pre-test in March, 1991. Group two was made up of 39 low progress students as a control group. Group two was able to take advantage of the interventions for at risk students that the school they attended offered. Finally, group three consisted of 39 students in a comparison group from five schools that did not offer Reading Recovery as an intervention (Center, et al.).

According to Center, et al. (1995), all of the students involved in the study were given a pretest before Reading Recovery started, in February/March, 1991. A posttest was administered in June/July 1991, a short-term maintenance test was administered in October/November, 1991 and finally a medium-term maintenance test was administered in June of 1992. The following is a list of the tests administered to each student, not all subtests were given to each individual group at each testing session.

1. The *Diagnostic Survey* developed by Clay. The *Burt Word Test* is typically added to the Diagnostic Survey in New South Wales.
2. *Neale Analysis of Reading Ability* (1988)
3. *Passage Reading Test*- this test measures the median number of words read correctly in one minute.
4. *Waddington Diagnostic Spelling Test* (1988)
5. *Phonemic Awareness Test*- (developed by Macquarie University Special Education Center) this test focuses on recognition and supply of rhyming pairs; sound-to-word and word-to-word matching of sounds spoken 1 second apart, in one syllable words; blending the *Yopp-Singer Phoneme Segmentation Test* to measure ability to articulate the individual sounds of a word; and phoneme deletion to measure ability to delete initial, medial, and final sounds in real words.

6. *Syntactic Awareness (Cloze) Test*
7. *Word Attack Skills Test* (developed by Macquarie University Special Education Center)- this test measures a students phonological recoding. (Center, et al.)

Center, et al. (1990) report that at the pretest stage there was no significant difference between the two groups on any of the tests given. A posttest was given using all seven assessments described above (The comparison group was tested on all tests except the *Clay Diagnostic Test* and the *Burt Word Reading Test*.). The posttest results indicated that the students who received Reading Recovery scored significantly higher than the control group on all of the assessments described above, except the cloze test and the *Phonemic Awareness Test*. The authors state, “this result indicates that at discontinuation from the program, RR students significantly outperformed control students on all tests measuring words read in context and in isolation, but not on some tests of metalinguistics skills” (p. 252).

Fifteen weeks after the posttest the students were given the short-term maintenance test (Center, et al., 1990). The short-term maintenance assessment included all of the above tests except only the book level test component of the *Diagnostic Test* was used. The results of this set of tests indicated that the students who received Reading Recovery continued to score significantly higher on the *Burt Word Reading Test* and the Clay book level test. The result of this set also indicated that the Reading Recovery group’s scores were significantly different on the *Phonemic Awareness Test*, but not on the cloze test or the *Word Attack Skills Test*.

Center, et al. (1990) administered a medium-term maintenance test 12 months after the posttest. This set of tests was slightly different than the previous testing sessions. Like the short-term maintenance test, only the book level test was given from the *Diagnostic Survey*. The cloze test was eliminated and the *Woodcock Passage Comprehension Test* was added. The results of

the test indicated that 12 months after the posttest, there was no significant difference between the control and the experimental group in all tests except the Clay book level test, in which the experimental group scored higher.

In a study completed by O'Connor and Simic (2002), Reading Recovery was put to the test to determine whether the intervention reduced the amount of student referrals or placements into special education. Specifically, the authors stated the following purposes for the study:

1. To determine whether Reading Recovery reduced the need for special education services. Specifically, was there a significant difference in rates of referral and placement to special education at the end of the first grade between the children who have completed the Reading Recovery program and a comparable group of low-achieving students who have not received an intensive one-on-one literacy intervention?
2. To investigate whether Reading Recovery reduced referral and placement decisions for first grade children into special education for both outcomes of the Reading Recovery program. In other words how do the two groups of Reading Recovery students, discontinued and recommended, compare with each other, and against a comparison group, in the rate of special education services received by the end of first grade?
3. To determine whether the classification labels given to students placed in special education are appropriate and consistent with the outcomes of the Reading Recovery intervention. It was expected that the children who successfully complete Reading Recovery would not be classified as learning disabled, whereas children who are recommended for further services because they were not

discontinued from the program would, as a group, have a high percentage of children classified as learning disabled. (p. 638)

In the United States, each Reading Recovery teacher completes a scan on each of his/her students. The scan includes the student's scores on the *Observation Survey of Early Literacy Achievement* (Clay 1993), administered to the child at the beginning of the program, when the child exits the program, and at the end of the year. These data were obtained by O'Connor and Simic (2002) through the New York University Reading Recovery site database and used to answer the research questions stated above.

According to O'Connor and Simic (2002), the children involved in the experimental group were first graders identified as the lowest 20% of their class. The students were then given the six components of the *Observation Survey*. The students who scored the lowest were placed into the Reading Recovery program. The remaining students were placed into two categories; first, the students who were low were placed on a waiting list to fill in spots in the program that were vacated by students who were discontinued from the program and the at risk. The students who did not receive Reading Recovery were placed in the control group.

The study consisted of 2,354 students participating in the Reading Recovery program and 1,770 students were in the comparison group (O'Connor & Simic, 2002). The students who participated in the program were enrolled in 11 different schools in New York City and the study spanned over three years.

As stated above, the *Observation Survey* was used to determine the lowest students in the class in O'Connor and Simic's (2002) study. The *Observation Survey* consists of the following six components:

1. A running record- used to determine what level the child is currently reading at

2. Letter identification- the student is given a jumbled list of capital letters and lower case letters and they must identify the letter by name, sound, or a word that starts with the letter
3. Concepts about print- the student is given a book and asked questions about the text in the book
4. Word test- the student is given a list of 20 words to read
5. Writing vocabulary- the student is asked to write all the words that they know
6. Hearing and recording sounds in words- the examiner dictates a story and the student writes. (Clay, 2002)

After the program was completed, data collected by O'Connor and Simic (2002) indicate that out of the 2,354 students who received Reading Recovery instruction, 223 or 9% of the students were referred for special education testing. The results indicated that out of the 1,770 comparison group students 246 or 14% were referred for special education testing. According to O'Connor and Simic, that 5% difference was a significant difference. As a result, by the end of first grade, 2% of the students involved with the Reading Recovery program were placed into special education, compared with 5% of the comparison group. O'Connor and Simic conclude:

Compared with other initially low-achieving students, Reading Recovery students are less likely to be referred for testing for special education; and among the students referred for testing, Reading Recovery students are less likely to be placed. As a result, a smaller proportion of all full-program reading Recovery students are placed in special education than in the comparison group. (p. 641)

The second question compared the Reading Recovery discontinued students with the recommended Reading Recovery students against the comparison group. O'Connor and Simic

(2002) found that 28% of the Reading Recovery recommended students and 14% of the comparison group were referred for testing by the end of first grade. In comparison, only 4% of the Reading Recovery discontinued students were referred for testing. By the end of the study, 70% of the Reading Recovery recommended students were placed in special education. The comparison group showed the same results, as 70% of the students were placed in special education while 31% of the Reading Recovery discontinued students were placed in special education.

Finally O'Connor and Simic (2002) found that only 3 of the 14 Reading Recovery discontinued students who were placed in special education were classified as learning disabled; the others were placed as emotionally disturbed, speech-language or other. Of the Reading Recovery recommended group, 69% were placed into special education as learning disabled while 48% of the comparison group were placed as learning disabled. O'Connor and Simic conclude that "this study found that Reading Recovery significantly reduces referrals and placements to special education" (p. 642).

Reading Recovery Small Groups Research

Iverson, Tunmer, and Chapman (2005) completed a study to determine if pairing groups of students to do interventions based on Reading Recovery were as effective as one-on-one intervention. Initially, the students were identified as eligible for intervention by looking at their scores on the *Metropolitan Reading Test*. If the students scored below the 50th percentile, they were eligible for federally funded Title One services. These students were then given tests (*Letter Identification* and *Hearing and Recording Sounds in Words*) from the *Observation Survey* (Clay, 2003) to determine the lowest 15-20 percent. After determining the lowest 15-20 percent,

they were then given the remaining subtests of the *Observation Survey*. From this group, the 75 students with the lowest scores were chosen for the experimental study.

The 75 students were grouped into 25 groups of three. According to Iverson, Tunmer, and Chapman (2005), the students “were matched as closely as possible on the raw scores for Letter Identification, Dictation and context-free word recognition” (p. 464). One of the three students was randomly chosen to receive one-on-one tutoring for an average of 33 minutes per day while the other two students received small group instruction for an average of 42 minutes a day for no more than 60 lessons.

When a student was ready to be discontinued, or when the 60 lessons were up, the student was given the *Observation Survey* again in addition to a pseudoword decoding test (Iverson, Tunmer, & Chapman, 2005). When the intervention and the testing were completed with all of the students, the results were calculated and the following was determined:

1. The results strongly suggest that the group instruction was equally effective as one-on-one tutoring.
2. There were no significant differences between the two Reading recovery groups and the classroom comparison on Text Level, Dictation, and Writing Vocabulary. The classroom comparison did significantly outperform the Reading Recovery groups in the area of the Dolch word recognition list.

Literacy Groups Research

Literacy groups take many different forms. Linan-Thompson and Hickman-Davis (2002) report that “grouping students in flexible, homogeneous groups for supplemental reading instruction reduces variability and provides the opportunity for focused and intensive instruction in the areas that have been identified as critical for reading development” (p. 248). Linan-

Thompson and Hickman-Davis completed a study comparing one-on-one, three-to-one and ten-to-one grouping for literacy instruction. The goal of the intervention was to build the reading skills of struggling students.

The 84 students who completed the study were monolingual English speaking and English language learners (ELL) in second grade (Linan-Thompson & Hickman-Davis, 2002). The students were grouped based on their *Phoneme Segmentation Fluency* score. The instruction was provided separately to the ELL students. Each group received 58 30-minute sessions. Each daily lesson was broken into five different time blocks.

1. Fluent reading (five minutes)- the groups focused on fluent reading. The students read familiar book to gain fluency and comprehension.
2. Phonological Awareness (five minutes)- the groups focused on phonological awareness to increase the ability to manipulate phonemes in words.
3. Instructional level reading (ten minutes)- the instructor focuses on instructional-level reading. Levels for each group were determined by using timed reading measures.
4. Word Study (seven minutes)- the goal for this time frame was to identify English word patterns and apply the rules to decode unknown words.
5. Spelling/Writing (three minutes)- the students focused on spelling and writing to reinforce words they encountered in reading and to apply rules learned in word study.

According to Linan-Thompson and Hickman-Davis (2002), the students were assessed four different times: prior to the intervention, after the 13 weeks of the intervention, four to six weeks after the intervention and four months after the intervention. Linan-Thompson and

Hickman-Davis found that the “students made significant gains and that these gains were maintained over time” (p. 243). Only 70 students were present for all four testing sessions. They concluded that the one-on-one group did not make significantly higher gains than the students in the three-on-one group. They suggest that having groups of three would be the more economical choice for school districts.

Kuhn (2005) completed a study to improve student’s reading fluency through small group instruction. The “study is intended to assess the relative effectiveness of repeated reading and non-repetitive readings for students in small group setting” (p. 131). A group of students who listened to the text were labeled the “listening only” control group and a group of students who received no additional literacy activities outside of the regular curriculum were used as another control group, for a total of four groups.

Kuhn (2005) reported that the students involved in the study were second graders from three classrooms. Each teacher identified six students to take part in the intervention. Two additional students were assigned to the control group. The groups met 18 times over a six-week period. The groups met three times weekly and the sessions lasted for 15-20 minutes each. The following is an example of what the teachers focused on for each of the three days.

1. Day one- the group reads a story together, if time allows the students were given the chance to read the story again.
2. Day two- the group was divided into pairs, and reread the book from the prior day.
3. Day Three- the students read the story together for one final time. The students had the opportunity to perform part of the text to the group. (Kuhn)

Kuhn (2005) reports that the pre and post testing were administered using the sight word component of the *Test of Word Reading* ([TOWRE], Torgesen, Wagner, & Rashotte, 1999), the *Qualitative Reading Inventory* ([QRI], Leslie & Caldwell, 1988) and the *Qualitative Reading Inventory II* ([QRI-II], Leslie & Caldwell, 1995). The TOWRE's sight word component required the students to read as many words in isolation as they could in 45 seconds. The QRI and the QRI-II are tests to determine the number of miscues when reading a passage and whether the miscues change the meaning of the text and comprehension.

Kuhn (2005) explains that the results demonstrated that the students in the repeated reading group and the non-repetitive reading group were able to read more words in isolation than the listening only or the control group. As for the QRI results, the students in the repeated reading and non-repetitive reading groups made greater gains while reading more correct words per minute at their instructional level than the listening only and control group. As for the comprehension portion of the QRI and the QUR-II, only the non-repetitive reading group showed improvement.

Rashotte, MacPhee, and Torgesen (2001) studied the effects of small group literacy instruction in Newfoundland, Canada. The 171 students, grades one to six, enrolled in the school were given the Word Attack and Word Identification subtests of the *Woodcock Diagnostic Reading Battery* (1998). The 116 chosen for the program scored, on average, in the 13th percentile on the Word Attack subtest and 19th percentile on the Word Identification subtest. The non-selected students scores fell in the 84th percentile on both subtests.

Rashotte, MacPhee, and Torgesen (2001) explain that the 171 students were divided into two groups. Group one received the Spell Read program for 50 minutes a day for eight weeks. The students were placed in groups of three to five based on their grade level. Group two acted

as a control group while group one receive the treatment. After the eight weeks the groups were tested again and then group two received the treatment for seven weeks. Rashotte, MacPhee, and Torgesen (2001) state that the Spell Read program was administered by three teachers who received a six-day training program. During each 50-minute session the students focused on 30 minutes of phonemic activities followed by share reading for 15 minutes and finished off with free writing for the last five to six minutes.

The phonemic activities could include any of the following activities: using single sounds to build combinations of different sounds, to blend different consonant sounds together with a series of vowel sounds, or to break a syllable into it's individual sounds (Rashotte, MacPhee & Torgesen, 2001, p. 123). After the phonemic activities, the students took turns reading out loud, stopping to discuss what they have read at appropriate times to improve comprehension. When students were free writing, they were asked to reflect on what they read "again to emphasize that the importance of reading is to understand what is read" (p. 123).

Rashotte, MacPhee and Torgesen (2001) report that the students who were selected for the intervention were tested on three different occasions; before the instruction, after group one received the instruction, and after group two received the instruction. The students were tested on phonological processing, word-level reading, fluency, comprehension, and verbal ability (only tested at the pretest time).

After the first eight weeks of instruction, the results indicated significant differences in all test scores, except Word Efficiency, in favor of group one. Rashotte, MacPhee and Torgesen (2001) indicate that "these results indicate that the Spell Read program did make a significant impact at all grade levels in the students' phonological and phonetic decoding skills as well as in

their reading comprehension, word and text reading accuracy, text fluency, and spelling” (p. 127).

A post-test was administered after group two finished the instruction to find that their gains were similar to that of group one. After all of the tests were completed the authors discussed that “the results of the present study indicate that a phonologically based reading instruction program delivered in small group (3-5) can significantly impact the phonetic and word-level reading skills as well as the reading comprehension skills of deficient readers in the first through sixth grade.”

Summary

Reading Recovery, as a one-on-one program, appears to be effective in improving reading skills of students in first grade. However, because of the individualized nature of the program and the extensive teacher training, it is very cost prohibitive. One way to make Reading Recovery more cost efficient may be to use groups, rather than a one-on-one setting. Several research investigations have been conducted to determine whether the Reading Recovery group procedures are effective. According to the majority of research investigations, literacy groups, in many different forms, also help to improve reading skills. Using the foundation of Reading Recovery in small groups can reach more students who may have reading difficulties.

CHAPTER III. METHODS AND PROCEDURES

Reading Recovery is a popular early intervention program designed to help struggling readers in the early grades. The purpose of this investigation was to answer the questions: Do students involved in Reading Recovery Literacy Groups perform better than those who are not? and Does participation in Reading Recovery Literacy Groups impact reading performance? Chapter III will discuss the methods and procedures used in the present study. The literacy groups were based on the outline developed by Kristi McCullough from Western Wayne Elementary School in Cambridge City, Indiana.

Methods

Research Design

A quasi-experimental design was used to determine whether the 30 minutes a day, Reading Recovery literacy groups increased the reading levels and fluency levels of children in one first grade classroom. The students in the experimental and the control group were given pre and posttests to determine the results.

Materials

The *Observation Survey of Early Literacy Achievement*, (Clay, 2002) was used as the assessment tool. All first grade students were assessed using the *Observation Survey of Early Literacy Achievement*, which consists of the following six subtests:

1. A running record- used to determine what level the child is currently reading at
2. Letter identification- the student is given a jumbled list of capital letters and lower case letters and they must identify the letter by name, sound, or a word that starts with the letter

3. Concepts about print- the student is given a book and asked questions about the text in the book
4. Word test- the student is given a list of 20 words to read
5. Writing vocabulary- the student is asked to write all the words that they know
6. Hearing and recording sounds in words- the examiner dictates a story and the student writes. (Clay, 2002)

Leveled books were used throughout the weeks as reading materials (see Appendix A). Leveled books were books that were provided by the district and were either leveled by the reading specialist, using the Reading Recovery book list, or were leveled by the publisher. A running record was done each day on a different student to make sure that each student in the group was reading at the same level. If the majority of the group was reading at 90% or better, the group was moved up to the next level. Writing journals were used for students to practice their writing skills. Running records sheets were used to map reading levels.

Participants

The experimental group was a first grade classroom of 13 students; seven girls, six boys, who received Reading Recovery literacy circles for 30 minutes four times a week while the teachers planned on the fifth day. The control group consisted of a classroom of 15 students; five girls, 10 boys, who did not receive the Reading Recovery literacy circles. Out of the 28 total students, seven students received free or reduced lunch one student received English second Language services and three students were minorities (two African Americans and one middle eastern).

Procedures

Five teachers, one first grade teacher (the experimental classroom teacher), a reading specialist, a special education teacher and two tutors went to a week long training session on how to administer the six subtests of the *Observation Survey*. The reading specialist then modeled how the groups should run and a video on how to successfully implement literacy groups into the first grade classroom shown.

Using the *Observation Survey* test results, the teachers decided in which group students should be placed, based on their reading instructional level. To find the level at which each child read, the teacher completed a running record and recorded the number of errors the child made while reading and divided that number by the number of total words read. According to Clay (2002), 80-89% accuracy would be a hard text; 90-94% accuracy is instructional and 95-100% accuracy is easy. Only students in the experimental classroom were placed in literacy groups; the other test results were used to place students in the control classroom in leveled books.

The small groups of four to six students made up the literacy groups and the literacy activities were based on the teaching of Reading Recovery the following guidelines were developed by Kristi McCullough from Western Wayne Elementary School in Cambridge City, Indiana:

Day One: A familiar book was used to complete a running record with one student while the other students read independently. A new book was introduced on day one. The groups were guided through a picture walk, finding new vocabulary and decoding words with which they were unfamiliar. The book was read as a group and independently while the teacher walked around and listened to each student read. Then,

as a group, a sentence was generated about the book to use as a writing tool at the next session.

Day Two: A familiar book was used to complete a running record on a different student from the previous day. The sentence that was generated in the previous day's lesson was written on a sentence strip and cut up for the students to put together and write in their journal. Familiar books from the previous session were read as a group and independently while the teacher walked around and listened to each student.

Day Three: A familiar book was used to complete a running record on a different student from the previous two days. A new book was introduced using the same strategies as day one. A comprehension strategy was also introduced, for example: identifying characters and settings, identifying the beginning, middle and end of a story, identifying characteristics of the characters, KWL charts, fiction vs. non fiction, components of the book (title page, table of contents, index)

Day Four: A familiar book was used to complete a running record on a different student from the previous days. Word work was completed with the students. Word work was usually based on strategies to decode unknown words, for example: wordo (bingo with unknown words), chunking words to decode, make a word, etc.

Day Five: The teachers met to plan for the next week. During this time the classroom teacher discussed what strategies she was focusing on in the classroom for the week. Students could be moved to different groups, if needed. Every two weeks, the teachers were moved to different groups within the classroom.

The groups met four days a week for eight weeks, starting in October, and continued throughout the remainder of the school year. For the purpose of this study, the students were

post-tested in January to determine the gains they made during the first eight weeks of the program.

Data Collection

The first set of tests was administered in September, 2005, for other purposes. These data were reported as a pre-existing data set. A second set of tests was completed in January, 2006. The first set of testing included all six components of the *Observation Survey*, and a words-per-minute assessment to test the child's fluency rate. The second set of testing included the same tests completed in September, to determine the gains the students made, if any, in the time the literacy groups were implemented.

Data Analysis

The results from the September administration of the *Observation Survey* and a one-minute reading probe were used as base line data for all of the students. The results from the January administration of the *Observation Survey* and a one-minute reading probe were used as the post-treatment data. An independent samples *t*-test, tested at an alpha level of .05, was completed to determine whether the literacy group outperformed students in the classroom who did not participate in the literacy groups. A paired-samples *t*-test, tested at an alpha level of .05, was completed to determine how much of a gain each group made over time.

Summary

The investigation started after the *Observation Survey* was administered to all of the first grade students. The class that was chosen to receive the Reading Recovery groups was grouped by reading level. During the first eight weeks of the program, the teachers introduced the concepts of the Reading Recovery program. Each day was followed using the outline above. The groups read leveled books, reassembled cut up sentences and were taught strategies to decode

unknown words. The small groups of students seemed to enjoy working with students at the same level as themselves and often reached out to help and shared ideas with their groups. At the end of the first eight weeks the students were tested again, using the same set of tests. The results were tested at an alpha level of .05 to determine whether: (a) the experimental group performed better than the control group, and (b) whether the experimental group made gains over the eight weeks of intervention.

CHAPTER IV. RESULTS AND DISCUSSION OF RESULTS

The purpose of this investigation was to answer the questions: Do students involved in Reading Recovery Literacy Groups perform better than those who are not? and Does participation in Reading Recovery Literacy Groups impact reading performance? The students in the control group and the students in the experimental group were all tested in September, 2005, and again in January, 2006, using the six components of the *Reading Recovery Observation Survey* (Letter Identification, Word Test, Concepts about Print, Writing, Vocabulary, Sentence Dictation) and a words-per-minute probe. The means for all seven tests can be found in Appendix B. Chapter IV will include the results of the investigation as well as a discussion of the results.

Results

Table 1 shows the independent samples *t*-test results. The independent samples *t*-test was used to compare the experimental and control test results from the January testing. The results of the independent samples *t*-test results were tested at the .05 alpha level. The results indicate that the experimental group did not score significantly higher than the control group on any of the tests given: the book level test ($p = .44$); word test ($p = .22$); concepts about print ($p = .85$); writing vocabulary ($p = .99$); sentence dictation ($p = .71$) and words per minute ($p = .22$).

Table 2 shows the paired samples *t*-test results these results were based on the gains made between the September and January test results. The results indicate that at the point of posttesting (at a .05 alpha level), the experimental group made significant gains on each of the subtest from the *Observation Survey*: book level ($p < .01$); word test ($p = .01$); concepts about print ($p = .02$); writing vocabulary ($p = .03$); except the Sentence dictation ($p = .05$) and the

Table 1

Independent-Samples *t*-test Results

Dependent Variable	Mean	Degrees of	T-stat	P-value
	Difference	Freedom		
Levels	2.10	26	0.79	0.44
Letter Identification	0.17	26	0.62	0.54
Word Test	-1.25	26	-1.27	0.22
Concepts about Print	0.19	26	0.19	0.85
Writing Vocabulary	0.03	26	0.01	0.99
Sentence Dictation	0.36	26	0.38	0.71
Words Per Minute	13.27	26	1.26	0.22

Table 2

Paired-Samples *t*-test Results

Dependent Variable (test)	Group	Posttest – Pretest Difference	Degrees of Freedom	T-stat	P-value
Levels	Experimental	7.38	12	7.94	<0.01*
	Control	7.87	14	27.07	<0.01*
Letter Identification	Experimental	0.54	12	1.62	0.13
	Control	1.00	14	2.84	0.01*
Word Test	Experimental	3.00	12	3.12	0.01*
	Control	5.73	14	5.05	0.01*
Concepts About Print	Experimental	2.46	12	2.62	0.02*
	Control	4.80	14	6.87	<0.01*
Writing Vocabulary	Experimental	14.77	12	5.12	0.01*
	Control	9.73	14	4.78	0.01*
Sentence Dictation	Experimental	4.15	12	2.15	0.05
	Control	3.33	14	3.02	0.01*
Words Per Minute	Experimental	32.23	12	6.36	<0.01*
	Control	21.67	14	6.71	<0.01*

* significant at $p < .05$

letter identification ($p = .13$). The experimental group also made significant gains from September to January on the words per minute probe ($p < .01$).

Discussion of Results

The research questions for this study were: Do students involved in Reading Recovery Literacy Groups perform better than those who are not? The second question was: Does participation in Reading Recovery Literacy Groups impact reading performance? The results from the data collected indicate that there was no significant difference between the two group's test scores. Although the experimental group scores were higher in all tests but the word test, there was no significant difference between the test scores.

Although the test results indicate no significant difference between the two groups, the paired t -test results do indicate benefits for participating in the groups over the eight-week intervention. The scores in Table 2 show that the experimental group did make significant gains in all areas except in sentence dictation, and letter identification from September 2005 to January 2006.

Summary

The results of the testing were surprising. It was believed that the use of literacy groups would significantly improve first grader's literacy skills. Although the experimental group did not perform significantly better than the control group, their scores were not lower than the control group. The fact that the experimental group did make gains supports the notion that the literacy groups were beneficial to the students involved. Since this was the pilot year, the teachers have time to grow and polish their teaching techniques for years to come.

CHAPTER V. SUMMARY, CONCLUSIONS, RECOMMENDATIONS

The research questions for this study were: Do students who are involved in the Reading Recovery Literacy Circles out perform those who are not? and Does participation in Reading Recovery Literacy Groups impact reading performance? Chapter V will summarize the study, draw conclusions from the data, and provide recommendations based on the results of the research.

Summary

Reading Recovery has long been heralded as an excellent remedial reading program. Research (Center et al., 1995; Iverson & Tumnerm 1993; O'Connor & Simic, 2002) supports the notion that Reading Recovery has been very beneficial for students who are experiencing reading difficulties. One reason that Reading Recovery is not fully operationalized in most school is that it is extremely costly and the training for teachers is extensive (Stumpf-Jongsma, 1990). Through various trials, it was determined that Reading Recovery might be able to be used with small groups (Iverson, Tumner & Chapman, 2005; Linan-Thompson, Hickman Davis, 2002), which would make the program more cost effective. The purpose of this investigation was to determine whether Reading Recovery, through the use of literacy groups, would be effective in assisting students who are having reading difficulties.

The review of literature focused on Reading Recovery programs in classrooms. The data favor the use of Reading Recovery as an intervention program. Many of the research investigations cited support the Reading Recovery program, and provide evidence of its effectiveness. Research also points to the potential effectiveness of adapting Reading Recovery by using small group instruction. This study utilized information gleaned from professional conferences to engage students in Reading Recover Literacy Circles.

In this investigation, the Reading Recovery based literacy groups were started in October and ran through December, eight weeks total, for testing purposes. After the January testing was completed, the literacy groups were implemented into all three third grade classrooms. The reading circles continued to meet in all three first grade classrooms throughout the school year. The data collected from this investigation do not show that the students who were engaged in the Reading Recovery Literacy Group performed significantly better than those who were not in a reading recovery group. Although there were no significant gains over the control group the students in the experimental group did, according to the test results, improve their reading skills.

Conclusions

One conclusion that can be reached as a result of this investigation is that the Reading Recovery Literacy Groups were successful. Although the mean scores of the experimental group were not significantly higher than the control group's scores, they were, in fact, higher (except the word reading test). The students in the experimental groups gained on average 7.38 levels during the program, when the school district's goal for each quarter is to gain four levels.

Another conclusion drawn from the study is that more students were served by the use of literacy groups. By implementing the use of literacy groups, more children were able to be services without detracting from the effectiveness of the program. Previous research (Iverson, Tunmer & Chapman, 2005; Linan Thompson, Hickman-Davis, 2002) has shown that the effectiveness of Reading Recovery is not compromised by small group instruction. Although similar to Iverson's, et al. study, this study did not compare Reading Recovery as a one on one intervention to Reading Recovery groups; this study focused only on a comparison of performance of Reading Recovery Literacy Groups and those who did not receive such intervention.

Recommendations

After reviewing the results of the testing, Reading Recovery Literacy Groups should be recommended for use in schools. Although the results did not show that the experimental group's scores were significantly different from the control group's scores, the scores were promising enough to conclude that the students benefited from the small group instruction added to the regular curriculum. It may also be beneficial to implement the literacy circles into the late part of kindergarten to help emergent readers learn the strategies to decode unknown words and write about stories they read. Students in higher grades with reading challenges, or advanced kindergarteners may also benefit from being placed with the Reading Recovery groups at their level for additional reading instruction.

Other districts already involved in Reading Recovery may want to explore using literacy groups to reach more students in a more cost effective way. Annual training sessions on how to administer the *Observation Survey*, and how to implement the groups would benefit future teachers. Universities could look into offering an elective class to teach Reading Recovery strategies to future teachers so that they may implement the strategies into their regular curriculum in the classrooms.

Future researchers may want to complete a study with a larger group so that more diverse reading levels will be found. In the future, if a study was completed over a longer period of time the results may indicate different statistical gains since the treatment would have more time to affect students' reading performance. It may also be beneficial to determine if Reading Recovery Literacy Groups would be successful in other grade levels. Finally, future research may include comparisons of students who completed Reading Recovery Literacy Groups to students involved

only in one-on-one Reading Recovery intervention to determine if grouping students does affect the effectiveness of Reading Recovery as an intervention strategy.

Summary

Although more time could have changed the results of the study, Reading Recovery groups did improve the reading skills of first grade students in this study. Since the resources are in place and the teachers see the results in their classrooms over time, the groups will continue to be implemented in the district the study took place.

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APPENDIX A

BOOK LIST

The following is a list of leveled books read by each of the four groups over eight weeks.

Group	Book	level
Low	Shopping by Jillian Cutting	1
	Where's Gabby by Michele Dufresne	1
	Fruit Salad by Michele Dufresne	2
	My Busy Day by Laurel Dickey	2
	Jasper the Fat Cat by Michele Dufresne	3
	A Yummy Lunch by Michele Dufresne	2
	Farm Chores by Laurel Dickey	3
	Birthday Balloons by Monica Hughes	3
	Grandma's House by Michele Dufresne	4
	Food From Plants by Chloe Sinnatt	4
	Where are the Baby Chicks by Michele Dufresne	5
	Lost in the Jungle by Michele Dufresne	5
	Zoe's Birthday Present by Laurel Dickey	6
	The Hungry Kitten by Beverly Randall	6
	My Plant by Paula Barrios	6
	A Walk for Jasper by Michele Dufresne	7
Med Low	The Playground by Laurel Dickey	3
	I Like to Jump by Claire Llewellyn	3
	Farm Chores by Laurel Dickey	3
	The Chicks are Hatching by Michele Dufresne	4
	Bella's Birthday by Michele Dufresne	4
	Bella and Rosie Play Hide and Seek by Michele Dufresne	5
	Lost in the Jungle by Michele Dufresne	5
	Gilbert Wears a Dress by Michele Dufresne	6
	Blackberries by Beverly Randell	6
	Lost in the Woods by Michele Dufresne	7
	Are You the New Principal? By Jahn Taub	7
	Bobbie and the Play by Monica Hughes	8
	A Picnic Lunch by Michele Dufresne	8
	The Best Present by Moira Andrew	8
	Goldilocks and the Three Bears by Jenny Feely	9
	Ms. Mog's Cats by Jillian Powell	9
	Party Clothes by Michele Dufresne	

Group	Book	level
Med High		
	Cookie's Week by Cindy Ward	10
	Who's that Knocking on my Door by Marilyn Wooley	10
	Making Spaghetti by Jack Hastings	9
	Gilbert the Pig Goes on a Diet by Michele Dufresne	9
	The Fox and the Snail retold by Edel Wignell	9
	Space Ant Goes Home by Celia Warren	10
	Baby Bear Goes Visiting by Jenny Feely	10
	Reptiles by Sarah O'Neil	10
	Victor and the Kite by Shoo Rayner	10
	Little Monkey by Jenny Feely	11
	Lydia and the Ducks by Shoo Rayner	11
	Floating and Sinking by Sarah O'Neil	11
	Gabby Run's Away by Michele Dufresne	11
High		
	The Loudest Sneeze by Jenny Feely	16
	Enjoy! Enjoy! by Sarah Prince	17
	The Lonely Troll by Shelley Jones	17
	The Costume Parade by Greg Lang	17
	A Friend for Jasper by Michele Dufresne	18
	Starfish by Honey Anderson	17
	Dragons by Jenny Feely	18
	Who's the Boss by Michele Dufresne	20
	Journey to a new Land by Joelle Murphy	18
	X-Rays by Cheryl Jakab	18
	The Vinegar Bottle by Sue Whiting	18
	Rainbows by Carol Krueger	18
	Hippos by Beverly Randell	18
	City and Country by Jenny Feely	18

APPENDIX B
TABLE OF TEST MEANS

TABLE OF TEST MEANS

Group/ testing month	level	Letter I.D.	Word Test	Concepts about Print	Writing Vocab.	Sentence Dictation	Words Per Minute
experimental Sept. testing	8.4	52.8	13.6	15.4	18.9	31.1	31
experimental Jan. testing	15.7	53.3	16.6	17.9	33.7	35.2	64
control Sept. testing	5.8	52.1	12.1	12.9	18.2	31.5	29
control Jan. testing	13.7	53.1	17.9	17.7	33.6	34.9	50