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An Assessment of Student Reading Improvement Comparing Two Instructional Delivery Models: Reading Recovery (RR) and Promoting Early Success (PERS)

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**AN ASSESSMENT OF STUDENT READING IMPROVEMENT COMPARING TWO
INSTRUCTIONAL DELIVERY MODELS: READING RECOVERY (RR) AND
PROMOTING EARLY SUCCESS (PERS)**

BY

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DEDICATION

We are no more than our memories and fusion of our experiences. These habits of the mind ultimately create who we are. Experiences are bestowed upon us by each person who touches our lives, briefly or more enduringly.

My family is the enduring fiber of my life and it is to them I dedicate this work. They continually make me proud, joyful, and content which affords me the emotional freedom to enjoy additional pursuits. I hope that they recognize in me at least a small part of the excellence I see in each of them. I thank each of you for always being there, for appreciating my strengths, and tolerating my weaknesses.

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CHAPTER I

Introduction and Background

Reading acquisition has long been a central theme in the study of academic success. There are conflicting views and studies related to how children learn to read. Assumptions about how children learn to read directly affect the types of interventions that are selected to assist struggling readers.

When considering implementation of any program or set of strategies, district leaders include certain considerations: (a) Does research indicate that the intervention would achieve acceptable student success? (b) Can the program and resources accommodate the needs of all students requiring support? and (c) Is the intervention efficient and cost effective, or is it prohibitive?

Statement of the Problem

In the Brewster Central School District (BCSD), in New York State, the Reading Recovery (RR) intervention program had been implemented for over ten years for struggling first-grade readers. In about 1999, the Board of Education, the Superintendent, and the community began to question the success and cost effectiveness of RR, which serves only one student per teacher per 30-minute session for reading intervention.

In an effort to serve more students at a lower cost per capita, personnel chose to develop and pilot their own RR modified program: Promoting Early Reading Success (PERS). PERS is built upon RR precepts. The main difference between RR and PERS is

that RR is delivered to one student at a time by a RR-trained teacher and PERS is delivered to two students at a time by a RR-trained teacher. Both interventions incorporate similar strategies that align with research-based prerequisite principles deemed necessary for reading success.

The BCSD's PERS program delivered reading intervention to twice the number of students as did RR. Doubling the number of students served reduced the cost per student, essentially providing immediate responses to the district's considerations of cost and number of students served.

Purpose of the Study

Members of the BCSD Board of Education, the BCSD administration, and RR-trained teachers wanted to know if the reading success achieved by students in the two programs was comparable. The purpose of this study was to determine if any differences between the reading success of the students who received RR and students who received PERS were significant ($p < .05$).

Significance of the Study

If education is the business of educating children to be academically successful and functional members of society, then educators must investigate and incorporate strategies to teach and reach every child. Although most students become successful readers through regular classroom instruction, teachers are also obligated to reach those students who are not achieving reading success through the regular channels.

In times of accountability, limited resources, and changing student needs, education leaders should periodically review the programs they offer by conducting

program evaluations to obtain data as a base for decisions. The present study used readily available data to assist the school-site administrator in assessing competing, similar-cost programs to support selecting or continuing one or the other based both on efficiency, (cost) and effectiveness (student outcomes).

The 1998 reading scores on the National Assessment of Educational Progress (NAEP) indicated that four out of ten fourth graders in the United States could not read proficiently, thus preventing them from reaching high academic standards (New York State Education Department [NYSED], 1998). A vital research question addressed by the NYS Reading Symposium was what are the main features of effective primary-grade reading programs? Dr. P. David Pearson, chair of the symposium and affiliate of the College of Education of Michigan State University, identified research-based features most commonly revealed in effective reading programs:

1. Development of skills and strategies that support reading and writing: (a) word identification; (b) fluency; (c) comprehension, writing, and spelling; and (d) monitoring for understanding.
2. Programs providing many opportunities to read and write.

The symposium also addressed the development of reading and how instruction should proceed holistically:

1. Reading should be defined as a process of getting meaning from print.
2. Reading requires using knowledge about the written alphabet.
3. Reading requires knowledge about the sound structure of oral language for purposes of achieving understanding.
4. Reading instruction should include direct teaching of information about

sound-symbol relationships to students who do not know about them.

5. Reading instruction must maintain a focus on the communicative purposes and personal value of reading (NYSED, 1998, p. 3).

Chall (1983b) provided a framework for what it means to read during the different stages of development. Chall stressed that reading acquisition is a process that unfolds over time in which new skills are learned and then built upon. Chall's stages of a proficient reader look different at various ages. At the younger ages, basic reading skills such as decoding and word identification are the hallmark. At older ages, these skills become more automatic and the degree of reading comprehension ability differentiates the proficient from the poor reader.

Chall (1983b) acknowledged that many skills comprise reading: reading words, acquiring meaning from written text, etc. This means that there are many places in the development of the reader where problems may emerge. Acceptance of this developmental view that different stages of reading emerge at various ages, guides reading intervention strategies and focus. Defining the characteristics of the proficient and poor reader at their age expectations allows teachers to focus on appropriate instruction in the regular class and during intervention.

Three areas that consistently emerge in the research and differentiate proficient and poor readers are decoding, language skills, and domain knowledge. Domain knowledge allows the reader to make connections with prior knowledge and create understanding and comprehension. According to Kintsch (1998), good decoding skills allow good readers to be less dependent on the context of the text when reading a word. Proficient readers also use context clues more effectively than poor readers do.

Additionally, according to Kintsch, proficient readers construct meaning differently at the word level than poor readers. Proficient readers tend to have a richer understanding of word meanings and greater domain knowledge. This allows the proficient reader to better understand and better recall information in the text.

This study was not concerned with other acknowledged contributors to reading success such as socio-economic discrepancies, ethnic background, reduced class size, and non-native speakers of English. This study will focus upon what is within the locus of control of educators, specifically strategies and intervention group size.

Overview of the Study and Setting

The researcher studied two similar first-grade reading interventions and evaluated them based upon student outcomes. These outcomes were analyzed to determine whether differences detected between reading improvement of students who received remediation delivered by one RR-trained teacher to one student versus one RR-trained teacher to two students (PERS) were significant ($p < .05$). Both RR and PERS interventions employed similar strategies. The introduction of a second student in the PERS program required some minor variations of instructional delivery that are delineated in Chapter III.

The study took place in Brewster, New York during the spring 2001 and spring 2002 semesters. In the spring of 2001, five RR-trained teachers implemented the RR intervention program with one student each for 30 minutes a day. Together, they were able to provide intervention services for 20 students in the cohort. In the spring of 2002, the same five RR-trained teachers implemented the PERS intervention program for the first time. Each teacher used RR strategies but worked with two PERS students at a time

for 30 minutes a day. With few modifications and maintaining the integrity of the RR strategies, they served 42 students in a cohort using PERS.

Reading Research Overview

The teaching of reading is an essential area of study for educators. Most children learn to read and employ various strategies and tools in the regular classroom. This study focused on those students who were having difficulty learning through the regular classroom methods.

Learning to read is critical to a child's overall well being. If a youngster does not learn to read in our literacy-driven society, hope for a fulfilling, productive life diminishes. In short, difficulties learning to read are not only an educational problem, they constitute a serious public health concern. (Lyon, 1998, p. 14)

National attention is focused on early literacy, as several panels investigated and debated new directions in teaching children to read and write. The National Research Council (NRC) Committee on the Prevention of Reading Difficulties in Young Children analyzed research on effective programs for students who were having difficulty learning to read and write. Much of the research reviewed by the NRC met the criteria established by the National Institute of Child Health and Human Development (NICHD) for reliable, replicable research. The NICHD conducts and reports research in the area of reading. The NICHD, part of the National Institute of Health, a federal agency that emphasizes basic biomedical science and health-related research, has been studying normal reading development and reading difficulties for 35 years. The reason NICHD supports research in reading is the belief that learning to read is critical to a child's overall well being

(National Reading Panel, 2000).

The NICHD supported researchers have studied more than 100,000 children, published more than 2,500 articles, and written more than 50 books presenting the results of 10 large-scale longitudinal studies and more than 1,500 smaller scale experimental and cross-sectional studies.

Ten principles providing guidance for designing early intervention programs were defined based upon a survey of research that met the NICHD criteria and included research presented by Snow, Burns, and Griffin (1998). These principles, and other research-based proficient reader prerequisites, align with RR and PERS strategies and are discussed in Chapter II.

Teachers, rather than program/strategy selection by a district are often blamed for poor student achievement (D'Arcangelo, 1999; Smith, 1992). Instead of focusing on whom to blame, most researchers have focused on what educators need to know about reading acquisition.

The constructivist and the naturalist are two camps on reading acquisition. The constructivist view purports that learning to read is not natural and must be taught (Clay, 1993; Stanovich, 1994; Strickland, 1990). The naturalistic view maintains that learning to read happens naturally through experiences without instruction (Smith, 1992; Strauss, 2001).

This study referred to research from both camps. On the constructivist side is the teaching of fluency, the rate, and accuracy in oral reading. Chapter II breaks down fluency components needed to read connected text rapidly, smoothly, and automatically with little or no conscious attention given to the mechanics of reading.

On the naturalist side are the *meaning* pieces of reading which allow a child to read with understanding and enjoyment. This includes language, knowledge, and cognitive strategies. In both RR and PERS the teacher attempts to achieve a delicate balance between code-emphasis and meaning-emphasis influenced by student responses and the belief that the learner plays an active role in making meaning. An assumption made by teachers in both RR and PERS is that a child must acquire and use efficient skills and strategies to create meaning from texts.

One consistent agreement that permeated these two views, as well as voiced in many articles published on reading acquisition, is that a student's ability to read with fluency and comprehension affects his/her success as a student.

Research Questions

1. How can RR-trained teachers effectively serve a greater number of first-grade students needing reading intervention?
2. What are the reading gains for children receiving RR?
3. What are the reading gains for children receiving PERS?
4. What is the difference, if any, between the reading gains of students receiving RR services versus those receiving PERS services?
5. Were the reading gains achieved by students in each of the programs great enough to allow the students to be on grade level with their first-grade cohort members by the end of first grade?

Assumptions

1. The primary assumption of this study was that educators can and are obliged to teach students to read and thus require a researched based strategy map to guide them.

2. The researcher assumed that each of the five RR-trained teachers used the same strategies in a like manner. The researcher also assumed that the entrance and exit assessments were administered and recorded in a similar way so that there were minimal individual interpretation and variation in outcome data.

3. It is believed by many that the process and the product of quantitative evaluation are not suited to the imprecision of most social innovations, and, in fact, rational strategies often create more problems than they solve (Chambers, Wedel, & Rodwell, 1992, p. 276).

4. Chambers and colleagues (1992) added that evaluations could not be expected to deal with cause and effect, only with the webs of relationships related to the program under investigation. Nevertheless, the present study was delimited to a description and evaluation of outcomes of one cohort of RR students (2001) and one cohort of PERS students (2002).

Evaluation data allow the reader to create information through intuition and interpretation of the relationship between what is being studied and how the information will guide instruction decisions. The following define areas that were controlled, delimitations and areas that could not be controlled, limitations.

Delimitations

1. Control of the treatments in each of the groups included: (a) time the students

spent in the groups, (b) time of the school year the groups began, and (c) similarity of the treatments.

2. **Class size:** reviews of research and experiments support reduced class size. Class sizes of the first grade participants in this study were consistent ranging from 21 to 22 students per class.

3. **RR-trained teachers** who delivered RR in the spring of 2001 were the same RR-trained teachers who delivered PERS in the spring of 2002.

4. **Students** with the same or most similar entrance-data were paired for PERS intervention.

Limitations

1. **Teachers** were seasoned RR teachers but it was their first time teaching PERS.

2. **Some students** with higher entrance scores than the typical RR students' entrance scores received service through PERS because teachers were able to accommodate a greater number of students in PERS ($n = 42$) than in RR ($n = 20$).

3. **The amount of influence** one PERS student had on the other was not measured in this study.

4. **The roaming component** used during the first two weeks of RR was eliminated during PERS to allow for more teaching time that would be absorbed by the additional student.

5. **The writing component** was modified because of the addition of a second student.

6. Running records were recorded every second day on each child in the PERS groups, rather than every day as in the RR groups.
7. Homeroom teacher influence. Students in RR and PERS received literacy instruction from thirteen different classroom teachers. Delivery of instruction in the classrooms may have varied along with the level of reinforcement.
8. Students selected were limited to those available at BCSD at the time of the study.
9. This evaluation was conducted in one school district (BCSD) and results are not intended to be representative of any other school district. The results are part of the data to be considered in making a choice between two programs.

Strengths

1. Homeroom class sizes of the participants in this study were consistent, 21-22 students.
2. Both 2001 and 2002 spring cohort students received remediation from the same pool of RR-trained teachers.
3. These same RR teachers were integral in developing and modifying RR for the PERS program with the intent of maintaining the maximum number of RR strategies and activities as possible.
4. Outcome assessments performed on every student in the study were identical.
5. The same school district, curriculum, and entrance criteria only one year apart assumed a similar pool of youngsters for 2001 and 2002.
6. Delivery of both programs was similar concerning: (a) 30 minute sessions,

(b) spring delivery of both programs, and (c) strategies employed.

Definitions

The following are definitions for terms used in this study. They include ten principles of literacy programs that Snow, Burns, and Griffin (1998) suggested, along with nine additional definitions related to the study:

1. *Balanced, Structured Approach*: Provide a balanced approach so that literacy develops along a broad front and students can apply skills in reading and writing.
2. **Comprehension*: Teach students to construct meaning from print.
3. *Diagnostic Reading Assessment (DRA)*: A running record of reading errors to determine the reading level at 90% accuracy.
4. *Early Intervention*: Intervene early to undercut reading failure.
5. **Fluency/Automaticity*: Develop speed and fluency in reading and writing.
6. *Hearing and Recording Sounds in Words (HRS)*: Write letters associated with their corresponding sounds as presented in words.
7. *Individual Tutoring*: Provide one-to-one assistance for the students who are having the most difficulty.
8. *Letter Fluency (LF)*: Identify, by name, upper, and lower case letters.
9. *Pearson Developmental Reading Assessment (P-DRA)*: A running record of reading errors and comprehension assessment to determine the reading level at 90% accuracy.
10. **Phoneme Awareness*: Awareness that spoken words are composed of individual sound parts termed phonemes.

11. **Phonics*: Spoken sounds linked with letters.
12. **Phonics/Decoding Skills*: Teaching students to use simple and complex letter-sound relationships to solve words in reading and writing.
13. **Phonics/Structural Analysis*: Teaching students to use structural analysis of words and learn spelling patterns.
14. **Phonological Awareness*: Teaching student to hear the sounds in words (phonemes).
15. *Predictable Texts*: Texts that have familiar and repetitive vocabulary as opposed to natural language texts.
16. *Promoting Early Reading Success (PERS)*: All children supported during the school year by PERS. Details of program will be shared in Chapter II.
17. *Reading Recovery (RR) Program Children*: All children served during the school year by Reading Recovery.
18. *Recommended Action After a Full Program*: A child who was recommended for assessment consideration, for other instructional support, at the point of departure from an intervention group, after receiving a full program of at least 20 weeks (a positive action benefiting the child and the school).
19. *Roaming*: A Reading Recovery activity where children explore what they already know. This allows the teacher to observe student behaviors. No new items of learning are introduced in the first two weeks of contact.
20. *Running Record*: The recording of everything a child says and does as he/she tries to read a book that the teacher has chosen.
21. *Sound Segmentation (SS)*: Hearing sounds and clusters of sounds in words.

22. **Visual Perception of Letters:* Teaching students to perceive and identify letters of the alphabet.

23. *Writing Vocabulary (WV):* The number of words written in ten minutes.

24. **Word Recognition:* Teaching students to recognize words.

Note. * Words and definitions are supported as foundations of literacy by the NYS Reading Symposium and the NYSED (NYSED, 1998, pp. 6-7).

Note. ** Discontinued, a RR term, has been omitted since no child considered in this study was discontinued from the program.

Research Design

This is a retrospective cross-sectional evaluation of the RR and PERS reading intervention programs used in the BCSD. The data on the students who received RR in the spring of 2001 and PERS in the spring of 2002 have already been collected by the district. The text level data were obtained using the (a) Developmental Reading Assessment (DRA), (b) Pearson Developmental Reading Assessment (P-DRA), (c) Writing Vocabulary (WV), and (d) Hearing and Recording Sounds in words (HRS).

Differences between the entrance and exit scores of students in each of the above mentioned areas, in each of the programs, was analyzed to determine if there were significant ($p < .05$) differences in progress in each area between the cohorts.

Results of this study will assist BCSD personnel in making a program selection decision. The superintendent of the BCSD wrote a letter giving this researcher authorization to use the data.

Summary of Methodology

Participants

The outcome results from first-grade students from two different K-3 BCSD elementary schools were analyzed. There were 20 RR students and 42 PERS students in this study.

Students in both groups were selected based upon their performance on the (a) Writing Vocabulary (WV), (b) Hearing and Recording Sounds in Words (HRS), and (c) Developmental Reading Assessment (DRA) measures.

Focus Group

Comments from a focus group comprised of the five RR-trained teachers were anonymously recorded. Initial questions were general and open-ended to allow for diverse and broad range responses. Culminating questions were more specific. Krathwohl (1998) suggested using broad inquiry to provide the context in which to understand responses and then to move to more specific questions. He also suggested that using a focus group allows participants to collect their thoughts. Krathwohl shared that some shortcomings of the focus group are that responses are sometimes more carefully censored, individuals with a contrary view may be less likely to share ideas, and strong voices may monopolize the conversation.

A focus group format was used for this aspect of the study so that the details and experiences of one may stimulate others. The following questions were asked and responses were recorded:

1. What was unproblematic/problematic transitioning from working with one

student to two students?

2. Which RR and PERS modifications worked/did not work well?
3. What were the benefits/obstacles of working with two students?
4. What would you keep the same/change if anything?
5. In what ways did/did not the modified assessments give you valid

information to drive your instruction?

6. In general do you think that PERS is a viable (effective) alternative to RR?

Treatment

The greatest distinction between the programs was addition of a second student. Research and literature support small-group instruction but there is little research comparing one-to-one and one-to-two tutorial group size.

Each RR student was brought to a separate location to work with one RR-trained teacher during a session. Two PERS students were taken to a separate location where they worked with one RR-trained teacher during a session. The same books and similar strategies were used with each of the children in both cohorts.

The DRA was administered individually in the same manner with each student in both groups before and after program delivery. The results were the data used to determine reading success. DRA is a valid and reliable measure of fluency using pre-leveled books. Mean cohort increases of DRA levels, WV, and HRS calculated after program delivery were compared using independent T-tests to determine if there were significant ($p < .05$) differences between the gains of the two cohorts.

Grade-Level-Cohort (GLC) P-DRA data were investigated to determine whether

the reading gains achieved by students in each of the programs were great enough to allow students to be on grade level with their first-grade cohort members. The RR and PERS students' DRA, P-DRA, WV, and HRS improvement was part of the informal follow-up/feedback discussion with PERS teachers.

Significance of the Study

Results of the evaluation were shared with BCSD leaders to use as additional information to consider when making a choice between implementing RR or PERS. If results showed that the two treatments provide nearly equivalent student outcomes, then BCSD can double the number of students served for essentially the same investment of time and money.

Organization of the Study

Chapter I - Introduction: Presents a basic overview of the study including: (a) statement of the problem, (b) purpose and significance of the study, (c) research overview, (d) limitations and delimitations, (e) strengths, (f) definitions, (g) methodology overview, and (h) research design.

Chapter II - Research Background: Presents a research and literature review to support the significance of the study. This chapter will also review the important research and literature related to other variables and assumptions that are part of the present evaluation.

Chapter III - Methodology: Presents the design and methodology of the study. Descriptions of the collection of data and procedures used for analysis are presented.

Chapter IV - Analysis of Data: Presents the raw and tabled data and any calculations required to answer the evaluation questions.

Chapter V - Summary and Conclusions: (a) presents a summary of the study, (b) includes interpretations of the data analysis results, and (c) presents the conclusions. Also included are recommendations for future studies and practice.

CHAPTER II

Research and Literature Review

Debates continue over which teaching methods should be used to teach reading. Although some may argue that teaching is a craft, research results show that there are specific strategies that proficient readers use and non-proficient readers need to learn. A melding of craft and research based strategies suggest that teachers focus instructional time and energy assisting students to learn to use these strategies gradually.

This retrospective evaluation compared two reading interventions that employed research-based strategies that help children learn to read fluently. This chapter reviews the research and literature on the component skills of reading. It emphasized research-based reading skills and strategies that guide students to learn to read and have demonstrated effectiveness in supporting the struggling reader. A second purpose of the review was to establish the theoretic framework for this study.

Although this study's ultimate purpose was to evaluate two programs that instruct and assess specific skills, a background of beliefs and research defining these skills set the stage for the selection of these programs. The construct of reading encompasses word recognition and reading comprehension functions. The sub-domain of word recognition was the staple of this study. Regular classroom instruction sometimes does not provide adequately for students who encounter difficulties in reading. Some children learn well without any systematic training in phonetics. Others learn to read when instructed in phonetics and word analysis. Unfortunately, phonetic drill has, in too many instances

become the end in itself rather than the means to reading. The two programs being compared in this study incorporated phonetic and word instruction where literature was always a part of the daily lesson.

A Framework For Learning To Read

“Teachers are once more being reproached for their failure to make children literate. They are urged to stop using the wrong method or to concentrate on using the right method of teaching children to read” (Smith, 1992, p. 432). Smith is a professor and head of the Department of Applied English Language Studies at the University of Witwatersrand, South Africa, and is the author of at least 15 books on language and learning.

On the other side of the fence sits D’Arcangelo (1999):

I find it curious that teachers are often blamed for their students’ poor reading. Of all the people to whom I lecture, the largest group, the most committed group, is teachers. They’re the ones who want to know, ‘What do we know about reading? What can I take back to my classroom?’ (p. 32)

The Chief of the Child Development and Behavior Branch of the NICHD, G. Reid Lyon, reported that reading is the product of both decoding and comprehension. To learn to decode and read printed language, children must be aware that spoken words are composed of individual sound parts termed phonemes. This is called phoneme awareness. Linking sounds with letters is called phonics. Thus, phonics skills depend upon phoneme awareness. When we listen to each other speak, we do not consciously focus on the individual sounds (phonemes) within the words. The conundrum is that

what we learn to do as listeners is not so good for the beginning reader. Spoken language is seamless, yet the reader must detect the seams in speech to learn what sounds go with what (Lyon, 1998). He explained that phoneme awareness, phonics skills, and practicing these skills with texts lead to reading proficiency. Children must acquire fluency and automaticity in decoding and recognition. The NICHD research adds that linking the ideas presented in print to the reader's own experiences is what makes *good comprehenders*.

The National Institute of Child Health & Human Development [NICHD] (2000) reported on teaching children to read. The researchers separated their findings into phonemic awareness (PA) and phonics instruction. The NRP selected analysis of PA instruction because 52 studies reported that PA and letter knowledge (phonics) are the two best school-entry predictors of how well children will learn to read during the first 2 years of instruction.

Phonemic Awareness Instruction

Phonemes are the smallest units composing spoken language. An example would be the word "so" being made up of the two phonemes /s/ and /o/. Letters represent phonemes in the spelling of words. The instruction of PA involves teaching children to focus on and manipulate phonemes in spoken syllables and words. PA instruction is different from phonics instruction where letter-sound relations are the focus. PA instruction would be phonics instruction when children are being taught to blend or segment using letters.

Phonics Instruction

1. *Analogy Phonics*: Teaching students unfamiliar words by analogy to known word – recognizing segments of an unfamiliar word is identical to a familiar word, then blending.
2. *Analytic Phonics*: Teaching students to analyze letter-sound relations in previously learned words to avoid pronouncing sounds in isolation.
3. *Embedded Phonics*: Teaching students phonics skills by embedding phonics instruction in text reading words, into phonemes and to then select letters for those phonemes (teaching phonemically).
4. *Synthetic Phonics*: Teaching students explicitly to convert letters into sounds (phonemes) and then blend the sounds to form recognizable words.
5. *Phonics Through Spelling*: Teaching students to use phonemic strategies with words that have predictable sound to spelling correspondence; morphemic strategies for words made up of prefixes, suffixes, and bases; and words that are not phonemic or morphemic and must be taught as wholes.

The NRP conducted a meta-analysis using research data from 66 treatment-control group studies that compared phonics instruction to other form of instruction for their impact on reading ability. The findings indicated that "...systematic phonics instruction enhances children's success in learning to read and that systematic phonics instruction is significantly more effective than instruction that teaches little or no phonics" (NICHD, 2000, p. 4). The analysis revealed that, "systematic phonics instruction produces significant benefits for students in kindergarten through 6th grade and for children having difficulty learning to read" (p. 4).

Additional suggestions presented at the NYS Reading Symposium for nurturing proficient readers, included:

1. A wide range of language and literacy experiences;
2. Interaction with a broad range of literature;
3. A print-rich classroom environment;
4. Frequent opportunities for students to read books on their fluency and

comprehension level with opportunities to write; and

5. Active involvement by parents and family members.

These are essential components of the reading instruction repertoire used in both RR and PERS programs.

The NICHD has recently been challenged for its funding emphasis on phonics and PA rather than on other reading and literacy problems. Strauss (2001) argued that, "...NICHD presupposes the highly suspect view that illiteracy can be overcome without a concomitant battle against the vast socioeconomic discrepancies that exist in the United States" (p. 26).

Strauss (2003b) argued that the NRP's findings are falsified and flawed. He revealed that the summary report was generated by Widmeyer Baker, a public relations firm that is employed by McGraw-Hill. McGraw-Hill produces books and workbooks for phonics reading instruction. Strauss shared that the only reviewer of the phonics section of the NRP report was Barbara Foorman, a NICHD-funded researcher. Of the 38 articles included in the meta-analysis, Foorman was the lead or secondary author of four. This is 10% of the articles reviewed by NRP. Foorman was, in essence, the reviewer of her own work. Strauss was also concerned that the NRP did not use the medical model

and study whether there is a risk when children are exposed to intensive phonics. An additional argument against NICHD's process is that it omitted studies focusing on literacy relationships to group size and school size.

Shanahan (2003), a member of the NRP panel, responded to the controversy surrounding the NRP report on the study by NICHD researchers, attempted to clarify 10 misconceptions about the report. He began by stating that none of the critics of the report challenged the NRP findings. They took issue with the process, method, and what was NOT done for the report. Shanahan cited one critic (Pressley, 2001) who stated that the report's findings were so widely accepted that it did not contribute anything to what top researchers already know. Shanahan responded that the report's purpose was to inform policymakers and practitioners of just that type of information.

Shanahan (2003) admitted that some necessary information was omitted from the NRP report and video and some information presented was ambiguous. He refuted the comparison between the report, *Preventing Reading Difficulties in Young Children* (PRD) and the NRP report. He distinguished the PRD as a consensus report and the NRP as an evidentiary base of substantial and unambiguous collection of research studies. He concluded with, "The National Reading Panel report represents the most rigorous and thorough educational research base ever marshaled for public policy purposes" (p. 654).

Reading is an extremely complex psycholinguistic, socio-communicative and cognitive process. Because of the complexity of the mental processing and the number of factors (in the text, the reader's experience, and the context) that may influence the processing, it is almost impossible to study the reading process in entirety. (Jones, 1997, p. 175)

Jones (1997) referred to two different ways to view reading. *Synchronically* (at particular points in time) reading is a high-speed, automatic, simultaneous operation of complex linguistic and cognitive processes. This view speaks to the reader's ability to keep in mind story and sentence meaning, sentence syntax, with some metacognitive awareness of how they fit, and at the same time to perceive and identify words, word parts, and punctuation. This view focuses on what is going on in the mind of the reader. It is also the view of code-emphasis advocates.

Diachronically reading focus is on changing concerns and processes of the reader, activating prior knowledge, re-reading to problem solve, reflecting on meaning, and incorporating prior experiences. A good understanding does not exist between the high-speed, automatic processing of the mature reader and the processing that a beginning reader uses.

Jones' (1997) theory stimulates the question: Should struggling readers spend time with the details of learning to read since these habits may take them away from the gestalt of reading? Polanyi's (1969) concept of readers applying focal attention and subsidiary attention is important here. The mature reader gives focal attention to meaning and subsidiary attention to visual detail, language structure, and other sources of information. There is not much information in the area of focal attention and subsidiary attention concerning the beginning reader.

The teacher of the fine art of reading must be a craftsman who possesses and employs the tools of the trade – strategies. What is needed is an intricate balance between the use of effective strategies together with the ability to actively respond purposefully to the emerging reader's strengths and weaknesses.

Bloom (1964) found that by Grade 3, if a student scores significantly below the norms on achievement tests and does not receive special help, the student will continue to experience failure throughout the school years.

Strickland (1990) presented a broad perspective of literacy learning, which is studied from the child's point of view, and has offered insights into how young children learn to read and write. He focused not on whom to blame but what do educators need to know about learning to read to support reading acquisition:

1. Learning to read and write begins early in life and is ongoing. Young children who live in a "print-rich" environment are constantly observing and learning about written language.
2. Learning to read and to write are interrelated processes that develop in concert with oral language. Listening, speaking, reading, writing are developed in an interdependent manner.
3. Learning to read and write requires active participation in activities that have meaning in the child's daily life.
4. Learning to read and write involves interaction with responsive others.
5. Learning to read and write is particularly enhanced by shared book experiences. (Strickland, 1990, pp. 19-20)

Strickland's view differs from the traditional views of emerging literacy where skills are taught in isolation. Accepting Strickland's assumptions provides a framework in which to examine reading programs.

Conflicting Views on Learning to Read

There are two predominant yet seemingly conflicting views about how reading should be taught. These two views may instigate the confusion about how to teach reading. These contrasting philosophies about how to teach reading are embedded in either the *phonics* (skills or basics) approach or the *whole language* (naturalistic or emergent literacy or literature-based) approach.

The phonics approach to learning generally incorporates instructivist or academic goals where tasks are typically carefully structured, sequenced, and decontextualized into small bits of information that often require some small group or individual instruction by a knowledgeable adult. They include exercises designed to help students achieve mastery of tasks. The academic tasks in the early childhood curriculum usually address facts and skills that the majority of children are unlikely to learn spontaneously or by discovery, although under favorable conditions, many children do so. These tasks frequently involve memorizing lists or symbols, responding to questions that have correct answers, and practicing routine tasks that can be assessed as right or wrong.

The naturalistic approach incorporates constructivist or intellectual goals that address dispositions, that is, habits of mind that include a variety of tendencies to interpret experience. The intellectual disposition of the constructivist is to make sense of experience, to theorize about causes and effects, to hypothesize explanations to account for observations, and to analyze and synthesize whatever information is available. These dispositions can be seen when children are engaged in investigations of things around them in the course of which they persist in seeking answers to their questions and solutions to the problems they encounter. This view of learning to read focuses on the

making of meaning rather than on learning small bits of skills in isolation.

Smith (1992) stated that the acquisition of reading should mirror the acquisition of language. His would be the naturalist approach. He said that learning is social and developmental and children learn to read and write if they join the “literacy club.” In other words, humans want to be accepted and members of societal clubs, academic ones included. We learn to speak out of need, interest, and wanting to be like those around us. Smith contended that learning to read is in the same venue. Smith has an advocate in Strauss (2001) who stated:

Isn't a better explanation one that views learning to read as analogous to learning to speak and listen, or learning to sign under appropriate environmental circumstances that it develops naturally, without instruction, as long as the opportunity exists to interact meaningfully and purposefully with the appropriate medium? (p. 28)

In response to Strauss (2001), Wolf and Kennedy (2003) argued that:

It is simply the case that in English, the writing system reflects both our language's sound system (phonology), and the way that meanings are represented in the formations of words (morphology). Where it becomes complicated is when morphology trumps phonology. (p. 27)

Wolf and Kennedy (2003) said that at the core of Strauss' belief “is the notion that reading is an analogue to speaking and that both come naturally to the child” (p. 28). Strauss (2003a) retorted that their conclusion that children need “explicit instruction that clarifies the relationships between spoken and written language” (Wolf & Kennedy, 2003, p. 29) supports his own position. Strauss said that what method or strategy is used

to teach reading is not the issue, just that it must be taught. "Arguing that English spelling is largely morphophonemic, rather than more purely phonetic or logographic, does not alter this" (p. 31).

Perhaps a question to pose is, "How long would it take one to learn to read with no formal instruction of the 'mystery' and nuances of letters and spelling?" What is not in question is the need for a culture of literacy to exist for one to become literate.

Shaywitz, a neuroscientist and professor of pediatrics at Yale University School of Medicine, along with her husband, Bennett Shaywitz, are co-directors of the Yale Center for the study of Learning and Attention. D'Arcangelo (1999) interviewed Shaywitz whose research reflected that unlike speaking, reading is not an instinctive human ability. New imaging techniques now allow researchers to see how our neurocircuitry uses the brains' language system to both speak and read.

Shaywitz acknowledged that when children are put in a speaking environment they learn to speak. Language is instinctive. Reading is actually a recent development and not every society reads. The neurocircuitry isn't set up to allow us to read.

Clay (1993) wrote, "Because we invite children into formal education we must give up the idea that 'they ripen and mature so that after a while they begin to read'. This is not true. Teachers and schools are engineering certain transitions" (p. 2). Strickland (1998), however, found a balance between the two theories of naturalistic and basic skills learning. Most controversies have points of agreement. Educators on both sides of the phonics debate agree that, ultimately, reading and writing for meaning are paramount. Both sides are keenly aware of the importance of good literature in the lives of children and the need for responsive adults who support children's natural inclinations toward

making sense with print. Needless to say, both sides recognize the importance of the alphabetic code in learning to read and write.

Strickland (1998) synthesized other agreements from literature and studies:

1. Skills and meaning should never be separated.
2. Instruction is systematic when it is planned, deliberate in application and proceeds in an orderly manner.
3. Intensive instruction on any particular skill or strategy should be based on need.
4. There is no substitute for ongoing documentation and monitoring of learning to determine the order in which skills should be addressed and the level of intensity required to help a child or groups of children succeed in a particular area.
5. To track specific goals and objectives within an integrated language arts framework, teachers must know instructional objectives their district requires at the grade level they teach (pp. 8-10).

Strickland and the International Reading Association (1989) presented a “Whole-to-Part-to-Whole” conceptual framework. *WHOLE*: Learning with, through, and about whole written texts (predictable stories, dictated stories, content area materials, letters, charts containing songs, rhymes, messages, and lists). *TO PART*: Learning about how the parts (textual features) of language function in written texts. *TO WHOLE*: Learning to apply what was learned with, through, and about written texts.

Smith (1992) has written many articles and books that tout learning as being informal. His view is that:

learning is continuous, spontaneous, and effortless, requiring no particular

attention, conscious motivation, or specific reinforcement; learning occurs in all kinds of situations and is not subject to forgetting. In this view, learning is social rather than solitary. It can be summarized in seven familiar words: *we learn from the company we keep* (p. 432).

The opposite point of view holds that learning is memorization. The informal view holds that learning is growth. Stanovich (1994) wrote:

That direct instruction in alphabetic coding facilitates early reading acquisition is one of the most well established conclusions in all of behavioral science... The idea that learning to read is just like learning to speak is accepted by no responsible linguist, psychologist, or cognitive scientist in the research community. (pp. 285-286)

Lyon (1998) wrote that developing print concepts, familiarity with the purposes of reading and writing, age-appropriate vocabulary and language comprehension skills, and familiarity with the structure are essential for all readers to succeed. "For youngsters having difficulties learning to read, each of these foundational skills should be taught and integrated into textual reading formats to ensure sufficient levels of fluency, automaticity, and understanding" (p. 18).

D'Arcangelo (1999) reported that in a study of 300 children, most of whom were poor readers, Shaywitz found that the one task that most significantly differentiated them from the good readers was phonemic awareness. According to D'Arcangelo, Shaywitz has suggested that the findings are strong evidence that supports a phonologic model of reading, "The most comprehensive reading program explicitly teaches about the sounds of language. It teaches children that words can be broken up into these smaller units of

language, that the letters represent these units of language-phonics” (p. 29). D’Arcangelo added that Shaywitz says that while it is important that poor readers learn how to decode, it is also important that they build language and vocabulary while learning to read for meaning.

Chall (1983b) addressed five stages of reading development that must be negotiated in order to be a proficient reader:

1. Stage 1 - Initial Reading or Decoding Stage (Grades 1-2, Ages 6-7): Here arbitrary sets of letters are beginning to be associated with the corresponding parts of spoken words. At the end of this stage, insight is gained about the nature of the spelling system of the particular alphabetic language used. Three phases exist within this stage: (a) word substitution errors, (b) more errors that had a graphic resemblance to the printed word with a loss of semantic acceptability, and (c) continued concern with graphic exactness being a return to greater semantic acceptability. To advance, students need to build up the skill for making choices and let go of pseudo-reading.

2. Stage 2 - Confirmation, Fluency, Ungluing from Print (Grades 2-3, Ages 7-8): Here reading is not for gaining new information, but for confirming what is already known to the reader. Stage 2 seems to be when children use their decoding knowledge, the redundancies of the language, and the redundancies of the stories to read. To advance, it requires an opportunity for reading many familiar books for practice and fluency. This will be necessary for the acquisition of new ideas that emerge in Stage 3.

This study focused on stages 1 and 2, where learning to read consists more of the relating of print to speech. Stage 3 involves more of relating of print to ideas (Chall, 1983b).

3. **Stage 3 - Reading for Learning the New: A first step:** This is when a reader reads to learn new knowledge, information, thoughts, and experiences. This is where primary and intermediate readers separate. In this stage, reading is characterized by growing importance of word meaning and connection to prior knowledge and experiences.

4. **Stage 4 - Multiple Viewpoints (High School, Ages 14-18):** The ability to read efficiently complex materials on a wide variety of topics, from a variety of viewpoints.

5. **Stage 5 - Construction and Reconstruction – A World View (College, Age 18 and above):** In this stage there is accommodation, a great deal of knowledge, confidence, and humility.

Kintsch (1998) acknowledged that what makes a good reader is complicated. He wrote, "Highly intelligent persons and fluent readers may be poor decoders, and a person who knows a great deal about a particular domain but has low reading skills can outperform a highly skilled reader under the right set of circumstances" (p. 282). Kintsch presented three factors that he believes determines whether a person is a good reader: decoding skills, language skills, and domain knowledge. He connected decoding skills to proficient readers. He said that good readers recognize words almost twice as fast as poor readers do. Rapid decoding allows for better word recognition, which frees up resources for higher-level processing. Ability to decode feeds growth of vocabulary, additional word meanings, and richer representations of individual word meaning. Thus, a slow decoder uses higher-order thinking processes to compensate for a lack of decoding skills. Poor readers use sentence context to speed up their word recognition.

The University of the State of New York [CUNY] (2001) published a report titled *Early Literacy Guidance*. The report synthesized research that has been conducted over the past 30 years. It makes specific research-based recommendations regarding pre-reading/reading outcomes of students at the end of Pre-kindergarten through third grade. The report quotes the Reading Excellence Act, 1998 (Section 2252) to define reading as:

a complex system of deriving meaning from print that requires all of the following: (a) phonemic awareness: the ability to hear the individual speech sounds, or phonemes, in spoken language; (b) word recognition strategies including phonics; (c) fluency: the ability to read connected text with appropriate speed, accuracy, and expression; (d) sufficient background knowledge and vocabulary to foster reading comprehension; (e) comprehension strategies to construct meaning from print; and (f) motivation to read. (CUNY, p. 17)

Although comprehension is the goal of successful reading, it is through word identification skills that meaning is derived. Four basic reading skills used in this chapter that research has shown relates to reading with fluency are: (a) phonological awareness (ability to segment spoken words into vowels and consonants); (b) decoding (phonologic knowledge and lexical access); (c) visual-orthographic processing (word recognition fluency – sight word vocabulary); and (d) processing speed (automaticity of reading). This is not an exhaustive list of basic reading skills but these four emerged most often from a literature review as being essential component skills to reading comprehension.

The three skills assessed in this study are writing vocabulary (WV), the number of words written in ten minutes; Hearing and recording sound in words (HRS); and a running record of reading errors to determine the reading level – developmental reading

assessment (DRA) at 90% accuracy.

Purpose of the Three Assessments as Related to Research

The WV is writing behavior that is a good indicator of a child's knowledge of letters, and of left to right sequencing behavior. When writing words letter by letter the child must recall the word configuration and also the details. It indicates visual discrimination. According to Clay (1990), "This simple test was both reliable (i.e., a child tended to score at similar level when retested two weeks later) and valid in the sense that it had a high relationship with word reading scores" (p. 35). This aligned with Chall's stage 1 and Kintch's need of decoding skills for proficient readers.

HRS activities are designed to help the child think about the order of sounds in spoken words and to help the child analyze new words he wants to write into its sequence of sounds. Some children find it very difficult to hear the sounds that make up words. Children who struggle with matching the letter to its sound, an essential component of reading, are probably those who are unable to hear the sound sequences in words. This aligned with two important basic reading skills of phonological awareness and decoding (phonetics). Chall's stage 1 of corresponding association of sounds aligned with the spoken word and then letters aligned with the HRS assessment. Strickland and the International Reading Association (1989) spoke of the importance of learning about how the parts of language function in written texts.

The DRA is determined by the running record. A running record of text reading is similar to a miscue analysis (what errors do children make when reading). One of the reasons a running record is taken is to determine the evaluation of text difficulty. The

DRA levels in this study are determined at a 90% accuracy rate, which is the instructional level of a reader. A DRA of 89% or below is a difficult text for the reader and 95% or above is too easy a text for the reader. The running record provides valuable insights into *strengths* on easier texts and *weaknesses* on more difficult texts. This assessment aligns with Chall's Stage 2 when children use their decoding knowledge, the redundancies of the language, and the redundancies of the stories read. To advance, it requires an opportunity for reading many familiar books for practice and fluency. It also aligns with Kinitch's importance of rapid and accurate decoding.

All three assessment focal points are also supported by D'Arcangelo's (1999), Lyon's (1998), and Stanovich's (1994) research. Thames and York (2003) seem to synthesize both views. "Literacy is complex; it is a constantly mediated force that can take on a life of its own in different contexts, cultures, and social and political arenas" (p. 603). Perhaps this is a track where the twain shall meet. The essence of both factions emphasizes the creation of environment conducive to the acquisition of language. As Smith implied, literacy learning takes place in environments that are meaningful, useful, collaborative, and risk free.

The National Reading Panel's (1992) analysis of reading instruction concluded that an integrated approach which combines phonemic awareness skills, systematic phonics instruction, fluency, and reading comprehension, is needed to ensure that all children will learn to read.

Reading Recovery (RR)

RR enlists a blending of the two reading camp's philosophies. The teacher emphasizes the development of phonological awareness along with the use of contextual information to assist a child to learn to read in a meaningful, useful, collaborative, and risk free environment. RR has one clear goal: "...to dramatically reduce the number of learners who have extreme difficulty with literacy learning and the cost of these learners to educational systems" (Askew et al., 2000, p.3). RR is an investment in the professional skills of teachers, a research-based approach to helping children who are the lowest achievers, a systematic data collection and report on every child to a central national evaluation center.

During a RR session children read small books that often use predictable language. Teachers keep daily running records to analyze the child's reading performance. Children also compose and read their own messages or stories. Teachers provide detailed support for the children as they read more difficult texts. Reading skills are taught in the context of extended reading and writing. RR incorporates, "*Scaffolding* which is the act of providing support for learning through instruction, modeling, questions, and feedback and gradually withdrawing support, enabling independent learning" (Thames, 2003, p. 604).

According to Clay (1993), RR is based on two assumptions. The first assumption is that a program for a struggling reader must be based on a detailed observation of that child as a reader and writer, with particular attention to what the child is able to do. Time should not be wasted teaching a child what is already known. The second assumption is to recognize how children who become readers learn to read and how children who

become writers learn to write.

Shanahan and Barr (1995), who have opposing views on RR, worked together to analyze existing reading research data. Barr is a noted advocate for RR and Shanahan is a noted critic of RR. In 1995, they considered both sides in their review of RR. Their basic findings, based upon research they reviewed, were that RR leads to learning, it is less effective, more costly than has been claimed, and does not lead to systematic changes in classroom instruction, making it difficult to maintain learning gains. This is discouraging news given the RR program claims and its great expense.

Developed in the 1970s by Dr. Marie Clay, a New Zealand educator, Reading Recovery (RR) is a program to prevent reading failure. Program-trained teachers provide one-to-one tutoring for 30 minutes each day for approximately 60 lessons or 12 weeks. Most full-time RR teachers can serve 12 to 16 students per year. The program is delivered to the lowest 10% to 20% of the first-grade population who have certain prerequisite skills.

The following is a synopsis of RR as shared on the Reading Recovery Council of North America Website (Pinnell, 2000b). The synopsis aligns with the 10 principles defined below. RR integrates the balance that Strickland (1998) gleaned from the differing views on reading acquisition. RR also includes multiple strategies to teach phoneme and phonological awareness as well as the use of context clues and the making of meaning and fluency strategies for comprehension, although comprehension is not the criteria for moving onto the next level book. This study will use first-cohort RR literature levels based upon fluency, RR developmental reading assessment (DRA), as well as Pearson Developmental Reading Assessment (P-DRA) which includes comprehension

and allows comparison to grade level cohort. P-DRA is explained in Chapter III.

Lessons in each program include:

1. Reading a familiar story;
2. Reading a story that was read for the first time the day before;
3. Working with letters and/or words using magnetic letters when appropriate;
4. Writing a story;
5. Assembling a cut-up story when appropriate; and
6. Introducing and reading a new book.

The following 10 principles guide both RR and PERS:

Principle #1 - Phonological Awareness. Developing the ability to hear the sounds in words is explicitly recognized in RR. When children are evaluated for selection for RR, a measure of ability to hear and record sounds in words is used. Performance on this measure of phonological awareness provides data that teachers use daily as they work individually with young children. Children selected for RR are the lowest achievers in their first-grade classes. Most, although not all, need instruction to develop phonological awareness.

RR and PERS are based on the best current knowledge about how children become literate. They have their roots in Marie Clay's studies of young children's reading and writing behaviors.

Principle #2 - Visual Perception of Letter. Because RR teachers work one-to-one every day and keep daily records, it is possible to identify with precision what the child knows or is confused about. Teachers begin with the known set of letters and work for

expansion for children with very low letter knowledge, teachers use movement and, if necessary, verbal and visual approaches to help the child remember the letter. Children write letters, construct their own alphabet book recording their knowledge to date, and work extensively with magnetic letters.

Program evaluation reports indicate that with very few exceptions, children who participate in RR can identify the 54 characters (upper and lower-case letters of the alphabet, plus the print version of (a) and (g)) by the end of the program.

Principle #3 - Word Recognition. First-grade children who are having extreme difficulty in learning to read and write generally know very few, if any, words. These children are just learning to look at print and to identify a few letters and sounds. It is helpful to build a small but expanding repertoire of words that the child knows in detail and can recognize quickly. With that goal in mind, early in the program the teacher works to extend knowledge of words by having children make words using magnetic letters, trace words, and write words. Word cards may also be used. The words that the teacher selects to teach to children are: (a) words that occur most often in the language, (b) words needed often in writing, and (c) words that child almost knows and that a little more practice will bring to over learning.

Principle #4 - Phonics/Decoding Skills. In RR lessons, children learn letter-sound relationships in several different ways, and they are taught to apply that knowledge in reading and writing. Word-solving skills are assessed on a word reading test, a test of hearing and recording sounds in words, and a test of text reading. Analysis of students'

errors while they read texts reveals their current skills, and the teacher works from there. Through explicit instruction based on the individual's needs, students are taught to analyze words while reading text. Strategies included left-to-right letter or letter-cluster sound analysis as well as noticing word parts. Several different components of the lesson foster the use of sounds and letter correspondence. All instruction is directed toward helping children learn how words work and the automatic, rapid recognition of words while reading for meaning. If the child has low letter knowledge, the teacher will work intensively with letters; but when the child knows about 20 letters, the teacher will also begin to do some work with words in isolation. This procedure is called making and breaking.

Using magnetic letters, the teacher works with the child each day, moving from making words that the child knows to using predictable (regular) letter-sound sequences, to simple analogies, and to less predictable letter-sound sequences. The process is systematic in that the teacher has a precise record of the sound-letter sequences that the child already knows and can use; the expansion of knowledge moves from that place to more complex associations. The emphasis is on flexibility and on helping children learn principles to apply in solving many words.

Principle #5 - Phonics/Structural Analysis. In RR, word analysis is integral to the reading and writing of continuous texts, and there is also explicit instruction in structural analysis of words. Words are considered in isolation to illustrate principles that help children gain control of the principles that underlie English spelling. There is a strong link to reading and writing, with the goal of helping children quickly use knowledge of

word structure to take words apart and to spell words.

Principle #6 - Fluency/Automaticity. In RR, there is a strong emphasis on teaching for fluency and phrasing in oral reading. In the 30-minute RR lesson, the majority of time is devoted to students' reading of continuous text. While it is important for children to read and use problem-solving skills on a new, challenging text every day, RR teachers also make extensive use of re-reading texts. Teachers select texts carefully to encourage fluency.

Principle #7 - Comprehension. RR students are taught that what they read must make sense. Instruction helps students develop a variety of strategies directed toward helping children search for meaning as they read. In fact, the RR teacher assures that children never lose meaning by careful text selection, careful introduction, and conversation about the story. These strategies (called a self-extending system) include helping children: (a) monitor their own reading and writing; (b) search for cues in word sequences, in meaning, and in letter sequences; (c) discover new things for themselves; (d) repeat as if to confirm the reading or writing so far; (e) self-correct, taking the initiative for making cues match or getting words right; and (f) solve new words by using all the above strategies.

Principle #8 - Balanced Structured Approach. RR consists of an interrelated set of learning experiences. Teachers intentionally work to be sure that students make connections across components of the lesson framework. A key concept of RR is that

every new thing learned should be revisited in several other activities. A lesson consists of a variety of activities including reading and comprehending both familiar and new texts, writing a message of importance to the child, phonemic awareness, letter-sound correspondence, basic sight words, fluency, and teaching for strategic processing. It is this balance of activities, providing the opportunity to use skills in many ways, which allows for acceleration.

Principle #9 - Early Intervention. RR is a short-term (12 to 20 weeks) safety net intervention. Children are entered in RR at a critical time in their school careers (age six during first grade). RR helps children make accelerated progress and catch up with their first-grade peers. The program also helps students continue to progress with good, ongoing classroom teaching. It is a supplementary opportunity and is not intended to replace classroom instruction.

Principle #10 – Individual Tutoring. RR is defined as one-to-one tutoring. It is not a classroom program; it is not a small group program. Quite simply, if the instruction is not one-to-one, it is not RR.

Wasik (1998) reviewed many tutoring programs and looked for key components of those that were successful. After completion of her review she made the following recommendations that tutoring programs should follow: (a) hire a certified reading specialist who supervises the program; (b) provide ongoing tutor training and tutor evaluation; (c) create tutoring sessions that are highly structured; (d) develop tutoring that is intensive and consistent; (e) use quality reading materials; (f) provide ongoing student

assessment; (g) coordinate tutoring with classroom instruction; and (h) involve parents.

RR is a tutoring program that incorporates all of the above.

According to Clay (1997, p. 10), the following is a summary of four different areas of learning which facilitate reading.

1. Reading involves messages expressed in language. Usually it is a special kind of language, which is found in books. Children bring to the reading situation a control of oral language, but the oral language dialect differs in important ways from the written language dialect. Although some children may not speak the same oral dialect as the teacher almost all have a well-developed language system and they communicate well in their home and communities. They have control of most of the sounds of the language, a large vocabulary of words, which are labels for quite complex sets of meanings, and they have flexible ways of constructing sentences.

2. Reading also involves knowing about the conventions used to print language - direction rules, space formats, and punctuation signals for new sentences, new speakers, surprise or emphasis, and questions. These are things, which the skilled reader does not think about because he responds giving only minimal attention to such conventions of print. But for the beginning reader they are the source of some fundamental confusion.

3. Reading involves visual patterns, a cluster of words/syllables/blends/ letters, depending on how one wants to break the patterns up. Processing information from the printed page is so fast in skilled readers that it is only by drastically altering the reading situation in experiments that we can show how adults scan text to pick up cues from patterns and clusters of these components. Young children tend to operate on visual

patterns in very personal ways and slowly enough for us to observe some of how they approach the task.

4. The flow of oral language does not always make the breaks between words clear and young children have some difficulty breaking messages up into words. They have even greater trouble breaking up a word into its sequence of sounds and hearing the sounds in sequence. This is not strange. Some of us have the same problem with the note sequences on a complicated melody. "The terms operation or strategy are used for mental activities initiated by the child to get messages from a text" (Clay, 1997, p. 19).

Clay (1997) focused on the following strategies used in reading:

1. A child may have the necessary abilities but may not have learned how to use those abilities in reading. He will now be observed in order to teach him helpful strategies. He must learn how to work effectively with the information in print.
2. Or a child may have made insufficient development in one ability area (i.e., motor coordination) to acquire the required strategy (i.e., directional behavior) without special help. "He must learn how to... In spite of..."
3. Again, a child may have items of knowledge about letters and sounds and words but be unable to relate one to the other, to employ one as a crosscheck on the other, or to get to the messages in print. He is unable to use his knowledge in the service of getting to the messages. He must learn how to check on his own learning...and how to orchestrate different ways of responding to complete a smooth message-getting process.
4. In any of these instances the task for the reading/writing program is to get the child to learn to use any and all of the strategies or operations that are necessary to

read texts of a given level of difficulty (Clay, 1997, p. 19).

Recent research has made it clear that we need to focus on four aspects of how the sounds of English are represented in print:

1. Children have to learn to hear the sounds buried within words and this is not an easy task.
2. Children have to learn to visually discriminate the symbols we use in print.
3. Children have to learn to link single symbols and clusters of symbols with the sounds they represent.
4. Children have to learn that there are many alternatives and exceptions in our system of putting sounds into print (Clay, 1997, p. 65).

Comparison of PERS to RR

In 1985, The (Student/Teacher Achievement Ratio) STAR Project was funded by the Tennessee legislature. Their charge was to find out if class size reduction would impact student achievement. The study was extensive and included more than 6,000 students in 329 classrooms representing 79 schools and 46 districts. In the course of four years, over 12,000 students were involved. Finn and Achilles (1999) summarized the finding of Project STAR. They found that the study yielded a range of benefits which included improved teaching conditions, improved student performance during and after the experimental years, improved student learning behaviors, fewer classroom disruptions and discipline problems, and fewer student retentions (Finn & Achilles, 1999, p. 98).

If reduced class size, of less than 20 students per teacher, had such significant

impact upon achievement behaviors, perhaps a teacher working with only two students at a time would accomplish similar results as a teacher working with one student.

The PERS program was based upon the RR program. It mirrors the 9 of the 10 principles previously cited. The main difference between RR and PERS is that PERS is delivered to two students at a time rather than to one student. Both students have been paired according to the same reading level and skill needs. Minor differences between RR and PERS delivery were designed into the program due to the nature of paired reading.

“When watching first graders read together in pairs, the transactional, transformative potential of paired reading is revealed as well as a broader, more active definition of reading itself” (Griffin, 2002, p. 766). Paired reading allows for the social context of reading. Pairing readers with similar ability levels serves as a scaffolding technique to allow the readers to strategize together.

Griffin looked at a variety of studies that show a shifting of readers as assisted and assistor during paired reading. There were shifts between the learner and teacher role. “Rhodes and Shanklin (1993) found that paired reading interactions help beginning readers become more self-sufficient and less reliant on the teacher for assistance” (as cited in Griffin, 2002, p. 766).

Griffin (2002) noted three spheres of interaction: motoric (finger/word pointing); oral (conversational); and verbal (print related). The study revealed instances of new and shared meaning with pairs playing with the language in the text. This sharing created sustained involvement and supportive, interpersonal relationships.

Griffin (2002) reported that successful collaborative paired readers are ones that take their roles seriously. Success was measured by partnership success and defined as

smooth, fluent reading. Successful partners internalized and articulated the importance of assistance and scaffolding. They quickly stepped in to help when one reader was struggling. Less successful collaborators didn't find the experience to be expedient or a mutual activity. They thought of it as isolationist involving little interaction, collaboration, or assistance.

Because PERS took place with the teacher's close monitoring and guidance, the cautions Griffin (2002) presented became minimalized. Griffin strongly suggested that teachers observe paired reading events, provide mini-lessons and strategies such as alternate page reading, and allow students to have some ownership of their share in their interactions. The PERS strengths lie in the first two suggestions of close observation and mini-lessons.

In a study on small group literacy events with peers, Mathews and Kesner (2003) found problems during collaborative literacy events when children were challenged to coordinate their actions with peers who were more or less able to perform a task. They also shared that events can be organized in ways that allow children to share materials and to talk with one another as they work. These organized peer-activities enable children to work at a level compatible with their skill level as well as benefit from the expertise of more knowledgeable peers. PERS used closely monitored organized peer-activities. A PERS weakness was that children began to progress at different rates.

This RR/PERS evaluation examined both treatments, RR and PERS, to determine if any differences in student reading gains between the two treatments were significant ($p < .05$). P-DRA reading levels of the RR and PERS cohorts were also compared to the P-DRA reading levels of the GLC to which they belong.

This is an evaluation study comparing the effectiveness of two reading intervention programs. As Krathwohl (1998) stated, an evaluation study differs from research not just by methods, but in other aspects:

1. It is decision-driven instead of hypothesis-driven. It assists in making a decision about the worth of something. As in research, it seeks a consensus around the proper interpretations of data but may be limited by the few involved. In the case of this study it is the researcher and five teachers who are involved.
2. Because the evaluation process is decision-driven, its value lies in the process. Use is a prime criterion.
3. Use requires trust in the results, the process of evaluation must be as important as the product. In other words there must be consensus building around the proper interpretation of the data.
4. Policy choice is often made without complete information. Evaluations try to reduce the uncertainty and provide an information-rich decision-making environment. They provide an informed basis for action.

This is also a quasi-experimental study, as defined by Babbie (1999), "Quasi experiments are distinguished from 'true' experiments primarily by the lack of random assignment of subjects to an experimental and a control group" (p. 318). Students assigned to the reading intervention groups were deliberately selected using their pre-test reading data results.

This RR/PERS evaluation will examine both treatments to determine if there is a significant ($p < .05$) difference of student outcomes between the treatments. Students' exit P-DRA reading level will also be compared with the P-DRA reading levels of their

respective GLC.

Chapter II contains literature and research, which indicate the importance of early intervention for struggling readers. It compiles research-based indicators for children who may have difficulty learning to read. Rationales for selecting RR and PERS as intervention programs are also included in this chapter.

Chapter III describes the research design and methodology used to compare the effectiveness of the RR intervention program to the PERS intervention program. It explains the assessment indicators and their use in this study. An overview of the focus group, consisting of the RR-trained teachers from this study, is presented. Program strategies and implementation of both RR and PERS are defined.

CHAPTER III

Research Design and Methodology

The purpose of this study was to compare the effectiveness of two reading intervention programs to determine if there was a significant ($p < .05$) difference in the reading improvement of struggling first-grade students who received reading intervention through either Reading Recovery (RR) or Promoting Early Reading Success (PERS). The key structural difference between the RR and PERS programs was the introduction of a second student to the PERS group. The programs were delivered in a similar environment with similar intervention strategies by the same RR-trained teachers.

Evaluation research, or program evaluation as it is sometimes called, is the primary methodology of this study. It is applied research that is intended to have real-world implications (Babbie, 1999). Results of this evaluative study could be useful in helping educational leaders decide which of the two interventions, if any, is more effective in assisting students to achieve reading success. A second consideration might be efficiency, or, cost-per-pupil served, especially if differences between RR and PERS outcomes are small.

Information derived from a focus group interview of four of the five intervention teachers was shared along with the quantitative data collected from four assessments of each program. Three assessment pre-tests, post-tests, and improvement result means from RR and PERS spring cohorts were compared. These assessments were the Diagnostic Reading Assessment (DRA), which used a running record of reading errors to determine

the reading level at 90% accuracy; Hearing and Recording Sounds in Words (HRS) which had students write letters associated with their corresponding sounds as presented in spoken words; and Writing Vocabulary (WV) which recorded the number of words written in ten minutes. RR assessments have been criticized by some for using measures that were developed and administered by RR professionals (Hiebert, 1994). Yet, RR did replicate its successful results elsewhere (Pinnell, 1995, 1997) as measured by program indices, teacher observation of students' independent reading and writing behaviors, and the Iowa Tests of Basic Skills (Clay, 1993).

A fourth assessment compared the intervention cohorts' levels with their respective grade-level-cohorts (GLC) using the Pearson Developmental Reading Assessment (P-DRA). The September/October and May P-DRA were administered by the classroom teachers to each GLC student which included both RR and PERS students.

This chapter describes the research design and structures employed to conduct the evaluation. This chapter also details the methodology used to obtain the quantitative data. The questions addressed in this study were:

1. How can RR-trained teachers effectively serve a greater number of first-grade students needing reading intervention?
2. What are the reading gains for children receiving RR?
3. What are the reading gains for children receiving PERS?
4. What is the difference, if any, between the reading gains of students receiving RR services versus those receiving PERS services?
5. Were the reading gains achieved by students in each of the programs great enough to allow them to be on level with their Grade Level Cohort (GLC) members by

the end of first grade?

Participants

In the spring of 2001, 20 first-grade students having the greatest difficulty acquiring pre-reading/reading skills and strategies, received 18 weeks of RR intervention. Each RR-trained teacher delivered the intervention instruction as a pullout program to one student for 30 minutes each school day. In the spring of 2002, 42 first-grade students having the greatest difficulty acquiring pre-reading/reading skills and strategies, were given 18 weeks of PERS intervention. Each RR-trained teacher delivered the intervention to two students at a time as a pullout program for 30 minutes each school day.

Approximately 12% of the 2001 first-grade cohort was identified for possible RR intervention. Approximately 22% of the 2002 first-grade cohort was identified for possible PERS intervention. Potential students were identified based upon their classroom teachers' mid-year administered assessments of Letter Fluency (LF): Ability to identify, by name, upper and lower case letters; Sound Segmentation (SS): Ability to hear sounds and clusters of sounds in words; and Pearson Developmental Reading Assessment (P-DRA): The reading level determined by a running record of reading errors and comprehension assessment to determine the reading level at 90% accuracy.

Each student identified was then individually tested by RR-trained teachers using a Developmental Reading Assessment (DRA), Hearing Sounds in Words (HRS), and Written Vocabulary (WV). These assessments are described below with an explanation of why they were selected as the criteria (See Appendices I and J).

Instruments

Children selected for screening from both cohorts had the lowest LF and SS scores as compared to their GLC. Those children were administered the DRA, HRS, and WV by RR-trained teachers and their scores determined who would be included in a remediation group by the RR-trained teachers. These three assessments were the quantitative indicators used for comparison between RR and PERS student success. These three tasks, selected from six, presented in *An Observation of Early Literacy Achievement* (Clay, 1997), were used as pre-test, post-test, and gain mean measurements. Three of the six tasks were not included because they were administered to all GLC students by the classroom teacher: Letter Identification, Word Test, and Concepts about print (Brown, Eisenberg, & Ravage, 2001).

RR Text Reading Level – Diagnostic Reading Assessment (DRA)

The texts used for the DRA are somewhat predictable. Children are told the title of literature selection(s), given a brief standard introduction, and are asked to read predictable and repetitive text materials in graded levels of difficulty. The child's text-level reading indicates the highest level of text that he/she can read at 90% or above accuracy. Text materials of graded levels of difficulty were constructed by RR personnel at Ohio State University for testing purposes. This level indicates fluency and ability to self-correct for reading accuracy.

Entrance and exit DRA levels were used for students in both intervention cohorts. Some levels are not addressed in the scoring list below because, although used for assessment, they fall outside of the acceptable grade level expectations. Scoring of DRA

text levels (Brown, Eisenberg, & Ravage, 2001) are as follows: (a) 00-01 = readiness; (b) 3-8 = pre-primer; (c) 9-12 = primer; (d) 14-16 = end of grade 1; (e) 18-20 = grade 2; and (f) 26-30=grades 3-6.

Pearson Developmental Reading Assessment (P-DRA)

Children read authentic (not-predictable) text materials of graded levels of difficulty. The child's text-level reading indicates the highest level of text that he/she can read at 90% or above accuracy with the ability to retell the story with comprehension. This is determined by using a running record which documents fluency and reading errors. "Measurability is not at issue; understanding is" (Chambers et al., 1992, p. 282). The assessment is based upon the Pearson Learning Companies P-DRA assessment criteria and pre-selected literature. These texts are not repetitious or predictable. These text-levels align with Pinnell's (2000a) leveling of books, which is different from RR levels. RR DRA levels tend to be gauged slightly higher than P-DRA levels because students are being assessed on fluency alone without a comprehension component. The P-DRA does not assess every consecutive level which explains why some are not addressed in the list below.

Scoring of P-DRA text levels: (a) A-2 = emergent; (b) 3-10 = early; (c) 12-24 = transitional; and (d) 28-44 = extending. Acceptable levels for grades 1 through 5: (a) 16-20 = end of first grade; (b) 24-30 = end of second grade; and (c) 34-44 = third through 5th grades.

Because grade-level P-DRA and RR/PERS DRA levels are slightly different, a P-DRA comparison between remediated students to their respective GLC was included.

The purpose of the P-DRA level assessment was to determine an appropriate level of text difficulty and to record, using a running record, what the child does when reading continuous text. The actual running record was not included in this study. It was used to supply the teacher with the necessary information to determine the P-DRA level. The task was to read texts representing a gradient of difficulty until the highest text level with 90% reading accuracy or better was determined with teacher recording text reading behaviors during the oral reading task; texts were drawn from established basal systems and have, over the years, proved to be a stable measure of reading performance.

Stanovich and Stanovich (1995) found that authentic texts are not very predictable. This may mean that success with predictable texts may not necessarily translate into success with authentic texts. Content words in authentic texts, the most important words for text comprehension, can be predicted from surrounding context only 10 to 20% of the time (Gough, 1981, as cited in Lyon, 1998, p. 17). Authentic texts are being used on state and national tests to determine success in relationship to the state and national norms.

Writing Vocabulary (WV)

A test of the number of words written in ten minutes, constructed by Robinson, (1973) was included in the test battery of her research on predicting early reading progress. She determined that children's writing behavior and written text are a good source of information about a child's visual discrimination of print since eye and hand support and supplement each other to organize the first visual discriminations. The purpose of the writing vocabulary is to determine whether the child is building a personal

resource of words that are known and that can be written in every detail. The task is to have each student write all known words in 10 minutes.

During the WV, the child is asked to write all of the words he knows how to write, including his own name. This simple assessment is both valid, in that it has a high relationship with word reading scores, and reliable, as a child tended to score at a similar level when retested two weeks later (Clay, 1997).

Hearing and Recording Sounds in Words (HRS)

During this segment, a student needs to think about the order of sounds in spoken words. The skilled reader is able to coordinate what his eye is seeing and what he is saying. The connection between the two happens in the proficient reader when the visual, the analysis of signs in the written word, link together with the auditory, and the analysis of sound in spoken words. Being able to analyze each and link them seems to be present in the capable reader (Clay, 1997). The purpose of the HRS was to assess phonemic awareness by determining how well the child represented the sounds of letters and clusters of letters in graphic form. The task was to have each child write a dictated sentence, with credit for every sound correctly represented. There was a maximum score of thirty-seven.

Procedure

Students for both RR and PERS cohorts were selected using the data in Table 1. They received a comparable number of lessons and were measured against each other's pre-test and post-test and examination of their gain means using HRS, WV, and DRA.

Methodology

In this evaluation the researcher compared RR and PERS mean reading gains to determine if a significant ($p < .05$) difference, if any, could be detected between the two groups. A second comparison was made using the exit P-DRA reading levels of RR and PERS students to their respective GLC.

Only scores from children who completed the 18 weeks of intervention were used for the study. Possible reasons for non-completion of the intervention programs were: (a) a move out of district, (b) a determination that special education services would be more appropriate, (c) extended student illness; or (d) parental withdrawal of a student from the program.

Independent 2-tailed t-tests were used to compare pre-test, post-test, and gain mean DRA, HRS, and WV scores of RR and PERS students. These assessments are outlined in Clay's (1997) *Observational Survey* and defined above. Concepts about print were measured and compared using pre-test, post-test, and gain means of RR, PERS, and GLC P-DRA levels by means of independent 2-tailed t-tests.

Each of the five RR-trained teachers in this study had delivered RR services for a minimum of five years. They purposefully modified the RR strategies minimally in order to retain and transfer the integrity of delivery of instruction to the PERS program. This better allowed generalization to other RR-trained teachers who may choose to serve two students at a time while employing their expertise and prior training.

Serving two students at a time would permit RR-trained teachers to serve a greater number of struggling first grade students at an earlier stage of their pre-reading and reading development. The recording forms that were used for both RR and PERS are

in Appendices E through J.

Focus Group

A focus group was used as a setting to interview four of the five teachers in this study to get feedback on: What was unproblematic/problematic transitioning from working with one student to two students? Which RR and PERS modifications worked/did not work well? What were the benefits/obstacles of working with two students? What would you keep the same/change if anything? In what ways did/did not the modified assessments give you valid information to drive your instruction? In general do you think that PERS is a viable (effective) alternative to RR?

The five teachers were invited to the focus group, all but one agreed to attend. They received the six questions in advance knowing that the session would be recorded and that they would be asked additional follow-up questions when appropriate. The focus group started with broad questions and then areas of interest were targeted and expanded upon. The participants could refer to their copies of the six questions as needed. Individual opinions were very important and consensus was not the objective of the interview.

The interviewer, this researcher, was an observer/recorder and did not participate in the responses/discussions that ensued. The rationale was that, "Interviewer-respondent interaction effects appear to be quite subtle but can influence interview responses" (Kathwohl, 1998, p. 297). This researcher listened to the tape multiple times and analyzed the data for repetitions, relationships, and similarities that are shared in Chapter IV. Individual opinions, when not supported by the group, but which were in direct

response to questions and/or important/specific to the study, are also presented in Chapter IV. Focus group forms are in Appendices B through D.

Reading Recovery and PERS Strategies

The following is a description of strategies used for both RR and PERS lessons.

Rereading familiar books:

1. Attention to concepts, direction and space-time links of print and speech.
2. Orchestrating all the moves on continuous text to achieve effective reading.
3. Word and part-word processing embedded in text reading on the run.

All three of the strategies described under *Rereading Familiar Books* applied to new books.

Letter Identification Making and Breaking

1. Mostly learning to identify letters by some means. Some making and breaking of words but only those already known.
2. Use of making and breaking using onsets and rimes, and analogy.
3. As noted above but embedded within words (and occurring while the child is reading text).

Writing a Story

1. Creating texts, working on direction, learning letters, hearing sounds in words, and monitoring all aspects of the task.

2. **Word making, how to expand writing vocabulary, and gaining more control.**
3. **Independent work with creating texts and making words.**

Hearing and Recording Sounds in Words

1. **Grasps some phonemes, any position.**
2. **Grasps consonants, and in left-to-right order, and most letters with some independence.**
3. **Grasps most words by independent analysis using phonological and orthographic knowledge.**

Assembling (Cut-Up Story)

1. **Monitors by a few features in the print.**
2. **Controls direction, initiates checking, and notes errors and corrects.**
3. **Completes at times for practice, but by now there is not a lot of novel learning to be done.**

Introduction to the New Book

1. **Orientation to the story and preparing the child to remember to use personal strengths or new learning, plus emphasis on one or two new things to be learned.**
2. **Orientation and help with particular difficulties of the child's processing.**
3. **An overview of the story leaving much more for the child to discover while reading.**

New Book Attempted

1. Applying what is known to new text, with assistance, and teaching after story is complete but only on selected important items.
2. Still assisted with prompting and priming, and telling if need be but more a practice session for reading novel text.
3. Teacher is looking for a smoothly operating reading system that is self-extending. She is still helpful (Clay, 1993, p. 17).

The basis for both interventions was to: (a) teach for strategies and (b) link sound sequence with letter sequence, take words apart in reading, and teach for phrasing in fluent reading.

Rationale for Study and Data Selected

Four important questions to be answered when selecting the data to be analyzed are: What should be evaluated? Why should it be evaluated? How should it be evaluated? What will be done with the results of the evaluation? (McNamara, Erlandson, & McNamara, 1999). Responses to these questions are presented and gleaned from this study's literature review.

Why Reading Achievement Should Be Evaluated

1. Reading is a basic skill that the school is expected to develop in all students.
2. Reading is foundational to mastery of nearly all other school subjects.
3. Reading is a key to success in future educational experiences and the world of work.

4. Reading opens a window on the wonder and excitement of the universe.
5. Prevention and early intervention are more effective and efficient than later intervention and remediation for ensuring reading success.
6. Prevention and early intervention must be anchored to the school as the host environment and the primary context for improving student reading performance.
7. Prevention and early intervention pedagogy, programs, and procedures should be based on trustworthy scientific evidence.

How Reading Achievement In This RR/PERS Study Will Be Evaluated

A study by Tunmer, Chapman, and Massey University (2001) revealed a discrepancy between mean (near average) book-level gains reported by the RR teacher (16.6), and gains reported by the classroom teacher (9.0) for the same children. Independent research supported the classroom teachers' assessments. This researcher's study used the mean P-DRA levels indicated by classroom teachers when reporting the comparative data between the intervention groups and the GLC students.

P-DRA levels of expectation are defined in terms of grade-level. The P-DRA is authentic performance-based assessments in which the children respond to real text. This is done to reflect the ways in which we can expect students to use literacy for communication and learning purposes.

Validity and Reliability Estimates of the P-DRA

To assess the validity of the P-DRA instructional reading level, individual scores on the P-DRA for the second-grade population ($N = 2470$) were correlated with the

students' scores from the fall of third grade on the Iowa Test of Basic Skills (ITBS): Vocabulary, Reading Comprehension, and Total Reading subscales. All correlations were significant at the .01 level (2-tailed) using Spearman's Rho rank-order correlation; however, the highest and most meaningful correlation for this assessment was with Total Reading ($r = 0.71, p < .01$).

A P-DRA reliability study was performed by Williams (1999). The study was conducted to examine internal consistency of the P-DRA instrument and to estimate construct validity. Primary teachers from around the country participated. Three hundred six students from kindergarten through third grade were included in this study. Eighty seven teachers from 10 states participated. Each teacher assessed three students and the assessment conference was audio taped. Each tape was sent to a second and third person to rate. All participants ($N = 127$, originating teachers and rater) had prior experience administering the P-DRA.

Original P-DRA conference audiotapes were randomly assigned to blind raters who were outside the district of the originating teacher. Grade ranges were kindergarten and first grade, or second and third grade. To determine inter-rater agreement among teacher/rater, Rasch rating scale analyses were conducted across 4-facets. Rasch (facet) rating-scale analyses were employed to capture the multiple facets of the reading process and their interdependencies.

Results

Analyses revealed that agreement between the originator and second rater was strong, .80 inter-rater agreement estimate between the first two raters. Inter-rater

agreement among the three raters was not as strong at .74 across students, text levels and items.

Internal Consistency

The internal consistency was found to be quite strong for the five rating-scale items (i.e., item separation reliability; Cronbach's alpha = .98), across all three raters as well as for the P-DRA assessment texts.

Since the P-DRA instructional reading levels demonstrated strong correlations with the ITBS subscale for one large urban/suburban school district, this evidence adds strength to the belief that the DRA validly measures a child's ability to decode and understand/comprehend what he/she had read (content validity).

The main purpose of a P-DRA is to help guide instruction. Ninety-eight percent of the teachers and raters agreed or strongly agreed that the information gained about the reader during the P-DRA conference helped them better identify things that the child needed to do or learn next.

Summary

This chapter described the research design and methodology used to compare the effectiveness of the RR intervention program (one teacher to one student support) to the PERS intervention program (one teacher to two students support). A quantitative design collecting historical data of students in each of the programs during two consecutive spring semesters were used. Included in the study was qualitative data/feedback from the participating teachers which was collected during a focus group interview. The purpose

of the qualitative data was to realize the implications regarding the efficiency as well as the perceived effectiveness of each of the programs.

The increased number of students needing reading intervention support and the monetary implications of serving these students forces us to research other means to that end. This study was initiated to determine if the PERS model of intervention influenced a significantly different reading improvement in struggling first grade students' as compared to the RR model. Because the basic RR model and assessments served as the basis for the PERS model, application to similar students by other RR-trained teachers would likely have similar results to this study.

CHAPTER IV

Data and Results of Data Analysis

This chapter presents the data and statistical analyses of data collected on the reading gains of struggling students who received either Reading Recovery (RR) or Promoting Early Reading Success (PERS) remedial reading intervention programs. RR employs one teacher working with one student while PERS employs one teacher working with two students. PERS, serving twice the number of students as RR, could allow more struggling first-grade students to be remediated while lowering the cost per pupil. For example, in this study 20 students were served with RR and 42 students were served with PERS using the same five RR-trained teachers. A per-pupil cost of \$3,571 is incurred employing a reading teacher earning \$50,000 serving 14 RR-students over the fall and spring semesters, 7 PERS-students per semester. A per-pupil cost of \$1,785 would be incurred using the same reading teacher but serving 28 PERS students during the fall and spring semesters.

The researcher sought to determine if data indicated that PERS-taught students achieved an acceptable student success gain as measured by a comparison with RR-taught students. This information would be provided to the Brewster Central School District (BCSD) to help the leadership determine outcomes of each intervention and to decide if PERS was a viable, effective, and efficient means of remediation to be continued in lieu of or in conjunction with RR. RR and PERS student cohorts' means were also compared to their respective grade-level cohorts (GLC) to see if they were

within the average of the mainstream students after participation in an intense reading intervention.

The first section of this chapter describes the setting used in the study. The second section presents descriptive and context data comparing the effectiveness of the PERS and RR interventions and each intervention cohort with its respective GLC.

The third section presents retrospective feedback collected during a focus-group interview with the teacher participants of this study. In the interview, the researcher obtained teacher perspectives on problems encountered when transitioning from RR to PERS, if modifications worked well, benefits or limits of working with two students as compared to one, changes that would enhance PERS' effectiveness, usefulness of the assessments to drive instruction, and PERS as a viable alternative to RR. The guiding focus-group questions are presented in Appendix B.

Setting for the Study

The settings for the study were two kindergarten through third grade (K-3) elementary schools, designated A and B. The BCSD has two elementary schools, an intermediate grades four/five school, a middle school, and high school. At the time of this study, BCSD had approximately 3,500 students. School A had about 630 students with a first-grade population of approximately 150 students. School B had about 510 students with a first-grade population of approximately 110 students. Students from both schools were combined into two single remediation cohorts for analyses. First-grade students who were struggling with pre-reading and reading skills received reading intervention through RR during the spring of 2001 or PERS during the spring of 2002. Thus, the analyses were

conducted on two different cohorts.

Table 1

Student Demographics

	2000-2001		2001-2002	
Total K-3 Population:	1089 students		1091 students	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
English Language Learners	30	3%	36	3%
Eligible For Free Lunch	27	3%	31	3%
Eligible For Reduced Lunch	22	2%	23	2%
<i>Racial/Ethnic Origin</i>				
American Indian, Alaskan, Asian, or Pacific Islander	25	2%	25	2%
Black (Not Hispanic)	28	3%	32	3%
Hispanic	78	7%	72	7%
White (Not Hispanic)	958	88%	962	88%
Special Education	80	7%	89	7%

The two intervention cohorts consisted of first-grade students who exhibited a weak grasp of pre-reading/reading skills. The RR cohort received intervention (spring of 2001) using one teacher to one student and the PERS cohort received intervention (spring of 2002) using one teacher to two students. The same five RR-trained teachers taught both the RR and PERS programs. Student criteria for RR were those who were in the

bottom 10% of the 2001 GLC. The student criteria for PERS were those in the bottom 20% of the 2002 GLC.

The analyses compared results of RR and PERS cohort reading gains using the Developmental Reading Assessment (DRA), Writing Vocabulary (WV), and Hearing and Recording Sounds (HRS) pre and post data from each group. Results from a Pearson Developmental Reading Assessment (P-DRA) were used to compare the RR and PERS cohorts with their respective first-grade-level cohorts to determine if after remediation, students from the treatments were able to be assimilated into the mainstream with a comparative mean P-DRA level. The P-DRA was used because the classroom teachers administer this assessment to all first grade students and thus would provide a like-comparison of scores.

The DRA, administered by the RR-Trained teachers, tended to have a higher DRA level than did the P-DRA level because it focused mainly on fluency, omitting assessment of comprehension. The P-DRA level appeared to be more challenging to achieve than the DRA level because it included both fluency and comprehension expectations. The 2001 GLC's P-DRA was assessed only to level 20. This was the expectation for a first-grader at the end of the year. The 2002 GLC was assessed to the highest P-DRA level able to be achieved because first and second-grade teachers agreed that a more exact reading level would benefit the more proficient readers at the beginning of second grade. Since both RR and PERS students were assessed in the same manner as their GLCs, the difference in focus for 2001 and 2002 should not have influenced the results of the study. However, since P-DRA scores were capped at 20, the 2001 GLC P-DRA appears lower than the 2002 GLC P-DRA.

Data for the Interventions Presented and Analyzed

Tables 2 through 4 present mean pre-test and post-test data collected from the cohorts of RR students ($n = 20$) and PERS students ($n = 42$). Pre-test data for both groups were collected in January and the post-test data were collected in May but in different years (RR in 2001, PERS in 2002). The RR and PERS students were compared using a mean DRA score to determine their reading levels. The DRA measured fluency and accuracy of words read. Cohorts were also compared using Hearing and Recording Sounds (HRS) and Writing Vocabulary, which both are effective measures of future reading success (Brown, Eisenberg, & Ravage, 2001; Clay, 1993, 1997; Robinson, 1973). Table 2 shows the January DRA pre-test, the May DRA post-test, and mean gain differences for RR and PERS students. (t-test computations are in Appendix K).

Table 2

2001 RR Cohort and 2002 PERS Cohort DRA Assessment Means and Differences

Test Group and year	Pre-Test			Post-Test		Difference		Difference/ Sig.
	<i>n</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
RR (2001)	20							
DRA		7.95	1.67	22.30	5.44	14.35	4.89	
PERS (2002)	42							
DRA		8.31	3.70	19.83	6.09	11.52	4.77	

$p = .034$

Note. DRA = Developmental Reading Assessment; RR = Reading Recovery Cohort; PERS = Promoting Early Reading Success Cohort.

With a mean DRA entrance level of 7.95 for the RR cohort and a mean DRA entrance level of 8.31 for the PERS cohort a 2-tailed t-test of difference of means ($t = -0.414$, $df = 60$) $p = .681$ indicated that the difference was not significant at $p \leq .05$.

With a mean DRA exit level of 22.30 for the RR cohort and a mean DRA exit level of 19.83 for the PERS cohort a 2-tailed t-test of difference of means ($t = 1.54$, $df = 60$) $p = .129$ indicated that the difference was not significant at $p \leq .05$. This statistical result combined with an observation of the pre and post means indicates that the RR group, although starting behind the PERS group, had by post-test surpassed the PERS group, but that the post-test results were not significantly different at $p < .05$ (See explanation on page 70) .

With a mean DRA level gain of 14.35 for the RR cohort and a mean DRA level gain of 11.52 for the PERS cohort a 2-tailed t-test of difference of means ($t = 2.16$, $df = 60$) $p = .034$ indicated there was a significant difference at $p \leq .05$. The RR cohort had a significant mean level increase of 2.83 greater than the PERS cohort. RR was more successful than PERS at increasing the number of DRA levels a student progressed over the course of the intervention.

Table 3 contains the January HRS pre-test, May post-test, and the mean gain difference between the RR and PERS students. The HRS measured how accurately students wrote sounds heard in spoken words. The highest score achievable was 37. (t-test computations are in Appendix K).

Table 3

2001 RR Cohort and 2002 PERS Cohort HRS Assessment Means

Test Group and year	Pre-Test			Post-Test		Difference		Difference/Sig
	<i>n</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
RR (2001)	20							
HRS		30.20	9.95	35.50	3.02	5.30	8.21	
PERS (2002)	42							
HRS		34.10	3.14	35.86	1.37	1.79	2.71	

p = .014

Note. DRA = Developmental Reading Assessment; RR = Reading Recovery Cohort; PERS = Promoting Early Reading Success Cohort.

With a mean HRS entrance score of 30.20 for the RR cohort and a mean HRS entrance score of 34.10 for the PERS cohort a 2-tailed t-test of difference of means ($t = -2.32$, $df = 60$) $p \leq .024$ indicated that the difference was significant at $p \leq .05$. The higher PERS HRS mean entrance score reflected the greater number of students who were accepted into PERS than into RR and that those additional students entered with higher HRS scores. With a mean HRS exit score of 35.50 for the RR cohort and a mean HRS exit score of 35.86 for the PERS cohort a 2-tailed t-test of difference of means ($t = -.644$, $df = 60$) $p = .552$ indicated there was no significant difference at $p \leq .05$. Any difference between the RR and PERS exit levels could be attributed to a chance.

With a mean HRS score gain of 5.30 for the RR cohort and a mean HRS score gain of 1.79 for the PERS cohort a 2-tailed t-test of difference of means ($t = 2.52$, $df = 60$) $p \leq .014$ indicated that the difference between the HRS mean score gains of the two groups was significant at $p \leq .05$. The highest score that can be achieved for HRS is 37. Since the PERS group started with a higher entrance mean closer to the 37 there was less of a gain to be made to achieve the highest score. However, the success of the RR cohort is noted by a significant HRS mean score increase which allowed them to catch up to the exit mean score of the PERS students.

Table 4 includes the January WV pre-test, May post-test, and the mean gain of the difference between the RR and PERS students. The WV recorded how many words a student wrote in the course of 10 minutes. (T-test computations are in Appendix K).

Table 4

2001 RR and 2002 PERS WV Assessment Means

Test Group and year	Pre-Test		Post-Test		Difference		Difference/Sig
	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
RR (2001)	20						
WV	33.95	15.14	63.20	15.75	29.25	14.40	
PERS (2002)	42						
WV	37.93	11.69	61.55	10.60	22.67	11.38	
							$p = .056$

Note. DRA = Developmental Reading Assessment; RR = Reading Recovery Cohort; PERS = Promoting Early Reading Success Cohort.

With a mean WV entrance score of 33.95 for the RR cohort and a mean WV entrance score of 37.93 for the PERS cohort a 2-tailed t-test indicated that the difference of means favoring PERS ($t = -1.137$, $df = 60$) $p = .260$ was not significant at $p \leq .05$. The difference between the RR and PERS WV entrance scores is attributed to chance.

With a mean WV exit score of 63.20 for the RR cohort and a mean WV exit score of 61.54 for the PERS cohort a 2-tailed t-test of difference of means ($t = .488$, $df = 60$) $p = .627$ indicated the difference now favoring the RR cohort was not significant at $p \leq .05$. The difference between the WV exit scores can be attributed to chance, even though the RR cohort started lower than the PERS cohort and finished higher than the PERS cohort.

With a mean WV score gain of 29.25 for the RR cohort and a mean WV score gain of 22.67 for the PERS cohort a 2-tailed t-test of difference of means ($t = 1.95$, $df = 60$) $p = .056$ indicated that although approaching significance, the difference was not significant at $p \leq .05$. However, the 6.58 mean increase of RR students as compared to PERS students, although not significantly different at $p \leq .05$ approached significance at $p = .056$, the greater expansion of written vocabulary for the RR cohort than PERS cohort should be noted and re-examined in a future study.

To compare the effect size (ES) of the differences in all three mean gains between RR and PERS, ES was calculated for each by subtracting the mean of the PERS gain from the mean of the RR group and dividing by the SD of the "control" group, or of PERS. The results are as follows:

$$\text{DRA: } \frac{14.35-11.52}{4.77} = .59; \quad \text{HRS: } \frac{5.30-1.79}{2.71} = 1.26; \quad \text{WV: } \frac{29.25-22.67}{11.38} = .58$$

An effect size of .59 for DRA and .58 for WV gains indicated that students who received RR improved about .6 of a standard deviation (SD) more than did students who received PERS in both of these assessment areas. An effect size of 1.26 indicated that students who received RR improved about 1.3 of a SD more than students who received PERS in the WV assessment.

Data in Table 5 shows the comparisons of the RR cohort students' ($n = 20$) mean with the 2001 GLC students' ($n = 223$) mean. Table 6 shows the PERS cohort students' ($n = 42$) mean with the 2002 GLC students' ($n = 217$) mean. Comparison data were collected from the Pearson Developmental Reading Assessment (P-DRA) which assessed fluency, accuracy of words read, and comprehension. Table 6 shows the RR cohort September/October P-DRA pre-test, May post-test, and the mean gain of the difference between the RR and GLC students. The P-DRA was administered to all first-grade students and assessed reading fluency, accuracy of words read, and comprehension (Chall, 1983a; Chambers et al., 1992; Tunmer et al., 2001; Williams, 1999). (t-test computations are in Appendix L).

The P-DRA small gain mean differences between RR and PERS GLC's may have been due to a "ceiling effect" of stopping assessments at P-DRA level 20 (see Table 5). These cannot be recomputed so the effect size between RR and PERS P-DRA gains has not been computed. With a mean P-DRA entrance level of 2.15 for the RR cohort and a mean P-DRA entrance level of 4.49 for the GLC a 2-tailed t-test of difference of means ($t = -2.24, df = 241$) $p = .026$ indicated that the difference was significant at $p \leq .05$. There was a significantly lower mean entrance P-DRA for RR students than for the GLC

students. The RR students were the lowest achieving students on the grade level which was why they were selected for the intervention.

Table 5

2001 RR Cohort and 2001 GLC (Grade-Level Cohort) P-DRA Assessment Means

Test Group and year	<i>n</i>	Pre-Test		Post-Test		Difference		Difference/Sig.
		<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
RR (2001)	20							
P-DRA		2.15	1.46	16.00	3.51	13.85	3.36	
GLC (2001)	223							
P-DRA		4.49	4.64	*15.91	5.42	11.42	4.85	

p = .029

Note. P-DRA = Pearson-Developmental Reading Assessment (Classroom Teacher Administers to all First Grade Students); RR = Reading Recovery Cohort; GLC = Grade Level Cohort (2001). * P-DRA was capped at level 20.

Table 6

2002 PERS Cohort and 2002 GLC P-DRA Assessment Means

Test Group and year	<i>n</i>	Pre-Test		Post-Test		Difference		Difference/Sig.
		<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	<i>X</i>	<i>SD</i>	
PERS (2002)	42							
P-DRA		1.64	1.12	15.52	5.24	13.88	5.07	
GLC (2002)	217							
P-DRA		4.61	4.37	*19.11	8.14	14.41	5.81	

p = .586

Note. P-DRA = Pearson-Developmental Reading Assessment (Classroom Teacher Administers to all First Grade Students); PERS = Promoting Early Reading Success Cohort; GLC = Grade Level Cohort (2002). * P-DRA had no cap

The 2001 P-DRA was assessed only to level 20. This is the expectation for a first grader at the end of the year. The 2002 GLC was assessed to the highest P-DRA level able to be achieved because first and second-grade teachers agreed that a more exact reading level would benefit the more proficient readers at the beginning of second grade. Since both RR and PERS students were assessed in the same manner as their GLC's, the difference in focus for 2001 and 2002 should not have influenced the results of the study.

With a mean P-DRA exit level of 16.00 for the RR cohort and a mean P-DRA exit level of 15.91 for the GLC a 2-tailed t-test of difference of means ($t = .076$, $df = 241$) $p = .939$ indicated that there was no significant difference between the exit level means of the two groups at $p \leq .05$. With a mean P-DRA level gain of 13.85 for the RR cohort and a mean P-DRA level gain of 11.42 for the GLC a 2-tailed t-test of difference of means ($t = 2.19$, $df = 241$) $p = .029$ indicated a significant difference at $p \leq .05$. The difference between the mean gains of the two groups may be attributed to program effects.

Table 6 includes the PERS cohort September/October P-DRA pre-test, May post-test, and the mean gain differences between the PERS and GLC students. The P-DRA was administered to all first-grade students and assessed reading fluency, accuracy of words read, and comprehension. (T-tests are in Appendix L).

With a mean P-DRA entrance level of 1.64 for the PERS Cohort and a mean P-DRA entrance level of 4.61 for the GLC a 2-tailed t-test of difference of means ($t = -4.37$, $df = 257$) $p = .000$ indicated that the difference was significant at $p \leq .05$. The significantly lower mean entrance P-DRA for PERS students than for the GLC students was attributable to the PERS students being among the lowest achieving students on their grade level.

With a mean P-DRA exit level of 15.52 for the PERS Cohort and a mean P-DRA exit level of 19.11 for the GLC a 2-tailed t-test of difference of means ($t = -2.74$, $df = 257$) $p = .006$ indicated there was a significant difference at $p \leq .05$. Inspection of the pre and post means show that the PERS group's mean exit scores are still below the GLC student mean scores. The PERS treatment did not bring the PERS group equal to the average level of the GLC. This indicates that PERS was not as effective as RR in helping children to achieve grade-level scores.

With a mean P-DRA level gain of 13.88 for the PERS Cohort and a mean P-DRA level gain of 14.41 for the GLC a 2-tailed t-test of difference of means ($t = -.546$, $df = 257$) $p = .586$ indicated the observed difference was not significant at $p \leq .05$. The observed difference could have occurred by chance and not attributed to program effects.

Focus Group

To explore important areas that may have been overlooked or needed to be addressed, and to provide some qualitative descriptions to help explain why the statistical results occurred, a focus group including four of the five teachers who taught both RR and PERS was conducted. One teacher did not to participate.

In the interview, the researcher explored and targeted the teachers' perceptions regarding program implementation and student success. The core questions were structured but broad and nondirective to allow for depth of responses (see Appendix B). A few non-structured follow-up questions were flexible and adapted to group and individual responses.

Focus Group Questions and Responses

1. What was unproblematic/problematic transitioning from working with one student to two students?

Unproblematic: Regarding the transition from RR to PERS, the group stated that students appeared more comfortable at the beginning because they had a peer with whom they would work.

At the beginning, when the books were shorter, working with two students was not as much of an issue as it became during times when longer books were used. When one student was absent, time was allowed to differentiate and reinforce through games. Having one student who read fluently served as a positive model for the other student.

Problematic: The group agreed that initially materials and management of materials emerged as concerns: having enough leveled books, journals, supplies, and paperwork designed for two student records. Materials needed to be ordered or designed before taking on a second student. They said that the materials and management of materials were taken care of before the beginning of PERS.

During the delivery of each of the programs, the teachers invited parents to visit a

session of RR or PERS. The teachers said that it was difficult to get multiple parent permissions for the PERS parent visits. This was not the case for the RR parent visits.

The teachers shared that there seemed to be greater confusion on the part of the parents concerning homework requirements for PERS as opposed to RR, and that the parents seemed more accountable for assisting their children when they were receiving the one-to-one RR intervention. The teachers thought that parents felt meeting one-to-two was more like a group session and that their follow-up was not as important.

When the interviewer asked if equal follow-up and encouragement to complete homework were given to each family with PERS as with RR, the group said there was not. The group stated that although the two PERS students were initially homogeneously paired by entrance scores, one almost inevitably moved ahead more quickly than the other student. This made it difficult to engage both students consistently.

Two teachers said that working with two students created a competitive environment making it uncomfortable for the lower functioning child. One student would often call out an answer even after being reminded that it wasn't his/her turn. The other two teachers shared that they did not have a problem with this issue.

The group agreed that during PERS, when the cut-up sentence component was generated by one of the two students, sometimes the second student had difficulty reading the sentence. Two teachers state that they felt uncomfortable when the sentence wasn't grammatically correct and it went home with both children. The other two teachers said that they helped the children correct the sentence before sending it home and did not find this to be a problem. The group said that having to check two students' homework at the

beginning of the PERS session, as opposed to checking one RR student's homework, consumed additional time allowing less time for instruction.

2. Which RR to PERS modifications worked/did not work well?

Worked well: Teachers said that the paperwork they redesigned worked well, which included both attendance sheet and lesson plan formats. They also shared that there was more teaching time due to the decrease in the extensive amount of paperwork that was associated with RR affiliation.

Did not work well: In order to save time and meet the needs of both students in the PERS group, teachers said that there were fewer re-reads and sometimes only a few pages of a story were read. There were also shorter book introductions.

Teachers shared that they missed the monthly contact they had as RR teachers in the district. When asked why there was less contact and how PERS influenced this change, no reason was shared.

3. What were the benefits/obstacles of working with two students?

Benefits: The teachers said the benefits varied depending upon the specific two students. When the students were well suited, they served as reader models for the other students. Another benefit shared was having one student rephrase or assist the other student became positive reinforcement by "Teaching the other child how to do something," and "Using the language."

Obstacles: The group agreed that scheduling the two students (PERS) became more difficult since homogeneous grouping meant most children were taken out of different classes and there were twice as many students to schedule. As children progressed at different paces, the teachers said that they needed to be regrouped and

rescheduled. Although this did not take place during the period of this study, it was suggested that this should happen if PERS is adopted.

4. What would you keep the same/change if anything? To improve PERS, the teachers said they would have more parent meetings, at least as many as during RR, to reinforce homework follow-up.

Teachers in school A, 150 first-grade students, said that they could not serve all needy first-grade students by just implementing RR. PERS allowed for all struggling students to be remediated. The teachers in school B, 100 first-grade students, stated that they could serve all 20% of the needy first grade students implementing RR alone.

The group acknowledged that since there were a greater number of “slots” for students in PERS than in RR, some students who later ended up being classified as special education were able to be served by PERS. This allowed potential special education students to be identified earlier in the year.

5. In what ways did/did not the modified assessments give you valid information to drive your instruction? All four teachers felt that the modified assessments for PERS were fine and supported the development of the next lesson for each of the children.

6. In general do you think that PERS is a viable (effective) alternative to RR? The teachers shared that PERS is second best. RR assisted students in building their confidence. Since many of the paired students moved ahead at different paces, they stated this advancement for one student did not support the confidence of the weaker student.

The teachers said that the most desirable remediation instruction was RR because it is delivered one-to-one and can be paced totally according to the needs of the

individual child. They said that this individualization supported fluency acceleration, an essential goal of reading remediation.

The RR-trained teachers would like to maintain RR in the Fall and use PERS in the spring when students have more basic pre-reading skills. In the spring, classroom teacher input would help pair the students more accurately.

The teachers shared that not being affiliated with RR would allow them to move a child out of the program as soon as a child met the criteria for dismissal. This would allow another student to fill the slot and serve more students in the course of a year.

The Group's Profile of a Successful PERS Student. The two aspects that were found in the successful student are having: (a) strong home support and (b) students who were paired and excelled at the same rate.

Suggestions for the Future. Teachers shared their opinions that PERS effectiveness might be improved if:

1. Lessons were extended to 40 minutes, 10 minutes more than currently allotted. This would make up some of the time lost by serving two students;
2. Someone other than the reading teacher picked-up from and delivered students to their classrooms. This would allow less time to be consumed in transport;
3. A trained parent volunteer gave the students extra time to read individually and used the appropriate proficient reader skills and language taught during lessons;
4. There were consistent and additional parent meetings;
5. There were monthly meetings for the intervention teachers regardless of the

programs used;

6. There were more colleague/peer observations so they may learn from each other; and

7. They held parent meetings at the District Office conference room to emphasize the seriousness and importance of the programs and the essential component of parent support and homework.

Summary

The data were analyzed in two ways. First, it was analyzed to compare the effectiveness of the two programs. Secondly, quantitative data were analyzed to determine if students in each of the programs had made enough gain to be at a comparable reading level to the average of their GLC. The focus group information was used, in conjunction with the data analysis, to determine efficiency of the RR and PERS programs and how they think that PERS can be improved if the BCSD should choose to continue the PERS model of remediation delivery.

Chapter V discusses the results, implications, and limitations of the present study, as well as suggest recommendations for future research.

CHAPTER V

Summary, Recommendations, and Conclusions

Two assumptions underlie this study. The first is that, “Learning to read is critical to a child’s overall well being. If a youngster does not learn to read in our literacy-driven society, hope for a fulfilling, productive life diminishes” (Lyon, 1998, p. 14). The second supposition is that how children learn to read directly impacts the types of interventions selected to assist struggling readers.

Recent research has made it clear that we need to focus on four aspects of how the sounds of spoken language are represented in print. Children have to a) learn to hear the sounds in words b) visually discriminate their symbols, c) link single symbols and clusters of symbols with the sounds they represent, and d) learn that there are many alternatives and exceptions in our system of putting sounds into print (Clay, 1997, p. 65)

Clay is joined by many researchers who echo her theory (Clay, 1991). Lyon (1998) stressed the importance of the reader’s understanding of phoneme awareness (hearing sounds in words) and phonics (linking sounds with letters). Phonemic awareness is essential since spoken language is seamless yet readers must detect the seams. Lyon added that practicing these skills with texts led to reading proficiency through sufficient levels of fluency, automaticity, and understanding.

Reading is a high-speed, automatic, simultaneous operation of complex linguistic and cognitive processes. Reading must be fluent and automatic (Jones, 1997). Stanovich (1994) wrote that direct alphabetic coding facilitates early reading acquisition and is one

of the most well established conclusions in all of behavior science. D'Arcangelo (1999) quotes Shaywitz as stating, "The most comprehensive reading program explicitly teaches about the sounds of language. It teaches children that words can be broken up into these smaller units of language, that the letters represent these units of language-phonics"(p. 29). Chall (1983a) and Kintsch (1998) concur.

Reading Recovery (RR) and Promoting Early Reading Success (PERS)

systematically teach children to hear the sounds in words, visually discriminate the letter symbols, link single symbols and clusters of symbols with the sounds they represent, while practicing these skills using appropriately leveled and meaningful texts.

Studies have focused on the effectiveness of working with small groups of students versus working with larger groups. Reduced class size (below 20 pupils) can be expected to produce an increase in academic achievement. Studies indicate .2 to .4 effect size (ES) for average students and .4 to .6 (ES) for "hard-to-teach" children for small versus larger classes (Achilles, 2002). This same rationale translated into this study, which questioned if one teacher could remediate two students as effectively as one teacher could remediate one student.

The work of Griffin (2002) and Strickland (1990), presented positive aspects of pairing students. This implied to the researcher of this study that combining RR strategies and paired readers with similar abilities could have a positive impact on PERS intervention success. Griffin wrote that paired reading allowed for the social context of reading. Pairing readers with similar ability levels served as a scaffolding technique, which allowed the readers to strategize together. Griffin looked at a variety of studies that showed there were shifts between the learner and teacher role. Rhodes and Shanklin

found that paired reading interactions helped beginning readers become more self-sufficient and less reliant on the teacher for assistance.

Strickland (1990) synthesized a broad perspective of literacy learning. He too had points that implied that paired reading could be an effective addition for successful intervention. Strickland focused on what educators needed to know about learning to read to support reading acquisition. Learning to read and write are interrelated processes that develop in concert with oral language, involve interaction with responsive others, and are particularly enhanced by shared book experiences.

Independent 2-tailed t-tests were performed on pre-test, post-test, and mean gain on the Diagnostic Reading Assessment (DRA), Hearing and Recording Sounds in Words (HRS), and Writing vocabulary (WV) assessments to determine if the success of RR and PERS were comparable. These three assessments were administered to only the lowest achieving first-grade students and were comprised of 10% of the 2001 GLC for RR and 20% of the 2002 GLC for PERS. The DRA running record determined the text difficulty and provided valuable insights into strengths on easier texts and weaknesses on more difficult texts. The DRA aligns with Chall's (1983b) stage 2 where children begin to use their decoding knowledge and strategies learned. The HRS activities and assessment were designed to help the child think about the order of sounds in spoken words and to help the child analyze new words that he or she wants to write into its sequence of sounds (phonemic awareness). The WV indicated the child's knowledge of letters (Phonics). The HRS and WV align with Chall's stage 1 of corresponding association of sounds aligned with the spoken word first and then with the letters. All three assessment focal points are also supported by the research of D'Arcangelo (1999), Lyon (1998), and Stanovich

(1994).

Pearson Developmental Reading Assessment (P-DRA) pre-test, post-test, and mean gain 2-tailed t-tests were performed to determine if RR and PERS students could be successfully mainstreamed into their respective GLC's. This assessment was given to the entire 2001 GLC and 2002 GLC.

Reflections and considerations regarding the focus-group responses are shared in this chapter because teacher perceptions and beliefs may impact delivery of instruction and play a part in program success. PERS was not a packaged or scripted program, so the focus-group responses gave insight into teachers' investment in making the program succeed and/or how, in the future, the program could be more effective.

The following sections of this chapter present a summary of findings, limitations of the present study, suggested recommendations future research, and conclusions. The results of this study have implications for understanding a reading intervention delivered one teacher to one student versus one teacher to two students.

Summary of Findings

Pre-Test Scores

The DRA pre-test scores of RR and PERS students showed no significant difference indicating that students were similar in beginning skills. The HRS pre-test scores showed a significant difference. This difference may have existed because the RR students were the lowest achieving 10% of the 2001 GLC, while PERS students were the lowest achieving 20% of the 2002 GLC. Including the additional 10% of students in

PERS, the PERS students achieved higher scores than did the lowest 10% of the cohort who would have been in RR, thus increasing the mean score of the PERS group. (See Table 7 data and Appendix K for t-test results).

The WV pre-test scores of RR and PERS students did not show a significant difference. This indicated that the bottom 10% and 20% of the students in both RR and PERS produced a similar number of written vocabulary words. (See Table 7 data and Appendix K for t-test results). Although the difference of mean score gain and post-test mean was not significant, it is important to note that students in RR entered with a lower WV than PERS students yet exited with a higher WV than PERS students. Indicating that the RR program was more efficient at moving students ahead more quickly.

Post-Test Scores

The DRA, HRS, and WV exit scores of RR and PERS scores of indicated that there were no significant differences. (See Table 7 data and Appendix K for t-test results).

The DRA mean gain of RR and PERS scores indicated that there was a significant difference between them in favor of the RR students. RR students progressed more quickly through the reading levels than PERS students. RR students, who had a significantly different HRS mean score from PERS students upon entrance to the program, now exited with a difference that was not significant. Both of these results implied that the RR program worked more effectively and efficiently than PERS in successfully moving students ahead more quickly.

DRA 2-Tailed T-Test Results

The DRA post-test scores for the RR and PERS cohorts did not indicate a significant difference. Although not significant, it is important to note that RR students achieved a higher exit mean score than the PERS students even though they entered the program with no significant difference in entrance scores. (See Table 7 data and Appendix K for t-test results).

The DRA mean gains of the RR and PERS students proved to be significantly different. This would imply that the RR program assisted children in progressing more efficiently and had a greater impact improving reading proficiency more quickly than PERS.

HRS T-Test Results

The HRS pre-test scores of RR and PERS students indicated a significant difference between their means. Since PERS accepted 22 students more than RR, their scores were also higher and so may have increased the PERS mean entrance. (See Table 7 data and Appendix K for t-test results).

The HRS post-test scores of RR and PERS students did not indicate a significant difference. The HRS mean score gain of RR and PERS students indicated a significant difference in favor of RR students. The highest score achievable in HRS is 37 and so the PERS students began at a higher score than did the RR students and thus were able to progress a smaller amount to achieve a similar outcome.

WV T-Test Results

The WV pre-test and post-test scores of RR and PERS students did not indicate a significant difference, which inferred that both programs achieved their outcome goals. Both programs dealt equally well with a students ability to develop a written vocabulary. (See Table 7 data and Appendix K for t-test results).

Although the WV gain mean scores of RR and PERS students did not indicate a significant difference, there was an observed increase in the RR students' gain over the PERS students' gain.

Table 7

RR and PERS Pre, Post, and Difference of Gain Mean Scores for DRA, HRS, and WV

	RR (n=20)	PERS (n=42)	SIG
Pre-Test			
DRA	7.95	8.31	$p < .681$
HRS	30.20	34.10	$p < .024$
WV	33.95	37.93	$p < .260$
Post-Test			
DRA	22.30	19.83	$p < .129$
HRS	35.50	35.86	$p < .522$
WV	63.20	61.55	$p < .627$
Mean Difference of Gains			
DRA	14.35	11.52	$p < .034$
HRS	5.30	1.79	$p < .014$
WV	29.25	22.67	$p < .056$

P-DRA T-test Results for RR and 2001 Grade Level Cohort (GLC)

The P-DRA pre-test mean scores for the RR cohort and 2001 GLC indicated a significant difference. This makes sense since the students in RR were the lowest achieving 10% of the grade level. (See Table 8 data and Appendix L for t-test results).

The P-DRA post-test mean scores for the RR cohort and 2001 GLC did not indicate a significant difference. This implied that RR achieved its essential outcome goal of students functioning at the mean level of their GLC peers after intervention. The P-DRA mean gain for the RR cohort and 2001 GLC indicated a significant difference. The RR program was efficient at helping students progress at a faster rate than their 2001 GLC cohort and allowed them to catch up with the mean score of their GLC.

P-DRA T-test Results for PERS and 2002 Grade Level Cohort (GLC)

The P-DRA pre-test mean scores for the PERS cohort and 2002 GLC indicated a significant difference. This makes sense since PERS was comprised of approximately 20% of the lowest achieving students in the GLC. (See Table 8 data and Appendix L for t-test results).

The post-test mean scores for the PERS cohort and the 2002 GLC did not indicate a significant difference. This implied that the PERS program was efficient in helping students to catch-up with their GLC mean score. Although there was not a significant difference between the RR students and their 2001 GLC or the PERS students and their 2002 GLC, it is important to note that the difference between the PERS/GLC is at $p \leq .056$ and the RR/GLC is at $p \leq .939$. This may imply that RR enabled students to achieve a more closely aligned P-DRA post-test mean score than the PERS students. A possible indicator of why this difference occurred is reflected in the mean gain comparisons. The PERS mean gain score of 13.88 and 2002 GLC mean gain score 14.41 did not indicate a significant difference. This implied that PERS students progressed at the same average rate as their GLC.

Table 8

RR and PERS Mean Scores

	RR (n=20)	Cohort '01	SIG.	PERS (n=42)	Cohort '02	SIG.
P-DRA Scores						
Entrance	2.15	4.49	$p < .026$	1.64	4.61	$p < .000$
Exit	16.00	15.90	$p < .939$	15.52	19.11	$p < .006$
Mean Gain	13.85	11.42	$p < .029$	13.88	14.40	$p < .586$

Conclusions

The purpose of both the RR and PERS program was to enable struggling first-grade pre-readers to achieve similar reading levels as their GLC by the end of first grade.

The key assessment component used to measure the success of the programs was the P-DRA because it was administered to all first-grade students.

Implied in the success of any remediation intervention is its ability to move students ahead at a faster rate than the regular programs being delivered to the general grade population. This is an apparent necessity because students selected are functioning below their GLC and thus must progress more quickly in order to catch-up.

RR students were able to accomplish this accelerated learning as indicated by their significant P-DRA mean gain and not significant mean exit score comparisons with their GLC. PERS students were not as successful as RR students in accomplishing significant accelerated learning and cohort mean integration as indicated by not having a significant P-DRA mean gain and a significant difference of exit mean when compared with their GLC. RR, dealing with one student being remediated by one teacher, appears to be a more effective in serving struggling first-grade pre-readers than is PERS, which serves two students to one teacher.

Perhaps Clay's (1993) two assumptions that a program for a struggling reader must be based on a detailed observation of the child as a reader and writer with particular attention to what the child is able to do and time should not be wasted teaching a child what is already known. The question might be can this be done effectively if a teacher is working with two children at once?

Limitations

1. Although all of the teachers were RR-trained, this was the first time that they taught two students using modifications of the strategies they had used before.

2. The amount of influence one PERS student had on the other was not measured in this study.
3. The roaming component used during the first two weeks of RR was eliminated during PERS to allow for more teaching time that would be absorbed by the additional student.
4. The writing component was modified for PERS because of the addition of a second student.
5. Running records were recorded every second day on each child in the PERS groups, rather than every day as in the RR groups.
6. Students in RR and PERS received literacy instruction from thirteen different classroom teachers. Delivery of instruction in the classrooms may have varied along with the level of reinforcement.
7. The 2001 GLC and RR cohort students' P-DRA was measured to only level 20 because that was the first grade level expectation.
8. Students selected were limited to those available at BCSD at the time of the study.
9. This evaluation was conducted in one school district (BCSD) and results are not intended to be representative of any other school district. The results are part of the data to be considered in making a choice between two programs.

Future Research

1. Do/will RR-trained teachers get more proficient at delivering PERS as they implement it year after year? The goal would be to re-evaluate PERS after RR-trained

teachers have delivered it for more than one year.

2. Compare PERS to larger small group (up to five students) reading remediation programs to determine if it would be a viable option.

3. Are the gains made with RR and PERS sustained after withdrawal of the supplementary intervention as measured by how many students continue to need additional remediation support through the fourth grades.

4. Could reading teachers who have not been RR-trained be as effective remediating students one to one as RR-trained teachers?

5. Shaywitz studied a random group of 400 boys and girls who were going to attend a Connecticut public school to see if there were differences in their reading scores (D'Arcangelo, 1999). Interestingly, there were none. Yet, when they were monitored during a longitudinal study over their K-12 educational life, four times as many boys as girls were identified by their teachers as having reading problems. Shaywitz, after examining her data, believes that behavior criteria were being factored into the teachers' determination of reading problems. A future study might explore the difference in success of boys versus girls in the RR and PERS programs.

6. Students who are economically disadvantaged are more likely to benefit more from small classes than are students from higher socio-economic conditions. (Finn, 2002). How effective are RR and PERS when implemented with an economically disadvantaged population?

7. Replicate this or a similar study on a larger scale, perhaps clustering students with fewer homeroom teachers in order to minimize variances of instructional delivery style.

It is important for intervention in these areas to begin early. When you consider the progress an average reader makes during first grade, it is easy to see how students who fail to learn to read during first grade are far behind their peers and will have difficulty catching up. One to one tutoring is very costly. But if early intervention can prevent reading failure then the use of expensive intervention may be cost effective in the long run (Wasik & Slavin, 1993). Pinnell (1994) found that one-to-one instruction was essential for the lowest-achieving students, and that teacher training was an important factor in the success of RR.

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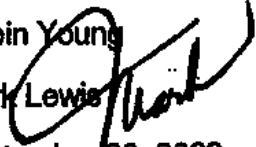
Appendix A
Superintendent's Approval Letter

30 Farm to Market Road
Brewster, NY 10509

**Brewster Central School
District Office**

Office of the Superintendent

Memo

To: Robin Young
From: Mark Lewis 
Date: September 23, 2002
Re: Dissertation Request

Your request to access Brewster Central School District student data pursuant to your doctoral dissertation is hereby approved.

Best of luck as you pursue this most worthwhile endeavor.

Cc: Personnel File

Appendix B
Focus Group Questions

Focus Group Questions

1. What was unproblematic/problematic transitioning from working with one student to two students?
2. Which RR to PERS modifications worked/did not work well?
3. What were the benefits/obstacles of working with two students?
4. What would you keep the same/change if anything?
5. In what ways did/did not the modified assessments give you valid information to drive your instruction? (Substantiate and give suggestions)
6. In general, do you think that PERS is a viable (effective) alternative to RR?

Appendix C

Focus Group - Informed Consent Form

Informed Consent Form

Researcher's Affiliation - Currently, the researcher is a Doctoral Candidate at Seton Hall University in South Orange, New Jersey in the Department of Educational Leadership, Management and Policy and conducting research in the area of Reading Interventions for first-grade students.

Purpose of the Research - The purpose of this study is to understand the impact of two reading intervention programs used to support first grade students at risk for literacy failure. The first program is Reading Recovery (RR), which employs specific strategies for reading intervention instruction and is delivered by RR-trained teachers to one student at a time. The second intervention studied is Promoting Early Reading Success (PERS) in which the same RR-trained teachers use similar strategies to RR to deliver reading intervention instruction to two students at a time.

Description of the Procedures - Today's focus group requests that you respond orally to a series of questions designed to determine your professional opinion and feedback on the two reading interventions you have implemented during the spring of 2001 and spring of 2002. This will take approximately one hour. The following are the initial questions that will guide the discussion. There may be some clarifying questions in response to your answers to these questions.

1. What was unproblematic or problematic transitioning from working with one student to two students?
2. Which RR to PERS modifications worked/did not work well?
3. What were the benefits/obstacles of working with two students?

4. What would you keep the same/change if anything?
5. In what ways did/did not the modified assessments give you valid information to drive your instruction? (Substantiate and give suggestions)
6. In general, do you think that PERS is a viable (effective) alternative to RR?

After the minutes are synthesized and recorded they will be submitted to the five focus group participants for feedback on accuracy of the documentation. This will take approximately one hour.

Voluntary Nature of the Project - You have to right to decline and refusal to participate carries no penalty. However, your voluntary participation is invaluable to this research and to existing knowledge regarding the comparison of these two intervention programs.

Anonymity- Please note that in order to preserve anonymity the names of participants are not recorded anywhere nor will they be used in the dissertation or in the report of the researcher's finding.

Confidentiality - When the discussion is concluded any notes and/or tape recording of the participants' responses will be locked securely in a cabinet retained in the researcher's home office to maintain confidentiality.

Access to Research Record - Only the researcher, at times assisted by her mentor, will have access to the research record in order to analyze the responses thereby further maintaining confidentiality.

Anticipated Risks- Participation in this research project presents no anticipated risks.

Anticipated Benefits - The researcher hopes that each participant will gain insight into the effectiveness of both the Reading Recovery and Promoting Early Reading Success programs. This, in turn, will allow the district to make more substantiated decisions concerning the delivery of remediation services to struggling first grade students.

Research Contact - The researcher is available to answer pertinent questions about the research and the research participant's rights to anonymity and confidentiality. To do so participants may call the researcher at John F. Kennedy Elementary School 845.279.2087 X116 or Dr. Achilles, Department of Educational Leadership, Management and Policy at Seton Hall University, 973.275.2861.

Permission to Use Audio-Tape - The participants permission to allow the researcher to tape record the focus group's discussion is requested. At no point during the discussion will participants be asked to identify themselves and only their anonymous responses to the researcher's questions will be taped. The participant has the right to review all or any portion of the tape and may request that it be destroyed. The tape will assist the researcher to access an accurate record of the participants' responses. In doing so, the researcher will be better able to make a more accurate interpretation and synthesis of responses.

Informed Consent Form - All participants will be given a copy of the signed and dated Informed Consent Form. The tapes are kept for three years and then destroyed. Participants have the right to review the tape content, but they cannot request to destroy them – this is not doable.

This project has been reviewed and approved by the Seton Hall University

Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached at (973) 275-2974.

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.

Subject or Authorized Representative

Date

Appendix D

Focus Group - Letter of Solicitation

**Robin Young
320 Lakeshore Drive
Brewster, New York 10509
(845) 279-5424**

Dear Participant:

Currently, I am a Doctoral Candidate at Seton Hall University in South Orange, New Jersey in the Department of Educational Leadership, Management and Policy and conducting research in the area of Reading Interventions for first-grade students.

The purpose of this study is to understand the impact of two reading intervention programs used to support first grade students at risk for literacy failure. The first program is Reading Recovery (RR), which employs specific strategies for reading intervention instruction and is delivered by RR-trained teachers to one student at a time. The second intervention studied is Promoting Early Reading Success (PERS) in which the same RR-trained teachers use similar strategies to RR to deliver reading intervention instruction to two students at a time.

Your expertise and integral involvement in RR's program transition to PERS and implementation of PERS have given you essential knowledge about the modification and delivery successes and disadvantages of these programs. A focus group format was selected so you may share your insights and experiences.

The focus group will request that you respond orally to a series of questions designed to determine your professional opinion and feedback on these two reading interventions you have implemented during the spring of 2001 and spring of 2002. This will take approximately one hour. The following are the initial questions that will guide the discussion. There may be some clarifying questions in response to your answers to

these questions.

1. What was unproblematic or problematic transitioning from working with one student to two students?
2. Which RR to PERS modifications worked/did not work well?
3. What were the benefits/obstacles of working with two students?
4. What would you keep the same/change if anything?
5. In what ways did/did not the modified assessments give you valid information to drive your instruction? (Substantiate and give suggestions)
6. In general do you think that PERS is a viable (effective) alternative to RR?

After the minutes are synthesized and recorded they will be submitted to the members of the focus group for feedback on accuracy of the documentation. This will take approximately one hour.

You have the right to decline and refusal to participate carries no penalty. However, your voluntary participation is invaluable to this research and to existing knowledge regarding the comparison of these two intervention programs.

In order to preserve anonymity, names of participants are not recorded anywhere nor will they be used in the dissertation or in the report of the researcher's finding.

When the discussion is concluded any notes and/or tape recording of participants' responses will be locked securely in a cabinet retained in the researcher's home office to maintain confidentiality.

Sincerely,

Robin Young

If you have any questions or concerns about this research, you may contact Robin Young at John F. Kennedy Elementary School 845.279.2087 X116 or Dr. Achilles, Seton Hall mentor overseeing this project, at 973.275.2861.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached at 973.275.2974.

Appendix E

Reading Recovery - Lesson Plan Form

Reading Recovery - Lesson Plan Form**Students:****Date:****Writing Words:****Make & Break:****Familiar Re-reads:****Running Record Book:****Writing Dictated by:****Story:****New Book:****Level:****Comments:**

Appendix F

Promoting Early Reading Success - Lesson Plan Form

Promoting Early Reading Success - Lesson Plan Form**Students:****Date:****Writing Words:****Make & Break:****Familiar Re-reads:****Running Record Book:****Writing Dictated by:****Story:****New Book:****Level:****Comments:**

Appendix G

Reading Recovery - Daily Running Record Sheet

RR DAILY RUNNING RECORD SHEET Lesson No. _____

Text Level _____

Name: _____

RR Teacher: _____

Date: _____

RUNNING WORD _____ ERROR _____ SC _____

Scores: ERRORS _____ RATE 1: _____ ACC. _____ % RATE 1: _____

ANALYSIS OF ERRORS _____ Easy 95-100% _____ Inst. 90-94% _____ Hard 50-89%
AND SELF CORRECTIONS

INFORMATION USED OR NEGLECTED
[Meaning (M) Structure or Syntax (S) or Visual (V)]

CROSS CHECKING ON INFORMATION
(Note that this behavior changes over time)

Page	Title and Level	Totals		Information Used	
		E	SC	E MSV	SC MSV

Appendix H

Promoting Early Reading Success - Daily Running Record Sheet

PERS DAILY RUNNING RECORD SHEET

Lesson No. _____

Text Level _____

Name: _____

RR Teacher: _____

Date: _____

RUNNING WORD _____ ERROR

SC

Scores: ERRORS RATE 1: _____ ACC. _____ % RATE 1: _____

ANALYSIS OF ERRORS ___ Easy 95-100% ___ Inst. 90-94% ___ Hard 50-89%
AND SELF CORRECTIONSINFORMATION USED OR NEGLECTED
[Meaning (M) Structure or Syntax (S) or Visual (V)]CROSS CHECKING ON INFORMATION
(Note that this behavior changes over time)

Page	Title and Level	Totals		Information Used	
		E	SC	E MSV	SC MSV

Appendix I
Reading Recovery - Reading Screening