

## ABSTRACT

Title of dissertation: THE EFFECTS OF A STRUCTURED PARENT TUTORING PROGRAM ON STUDENTS' READING FLUENCY

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This study examined the effectiveness of a brief parent tutoring intervention on the reading fluency of four second-grade students. The students were all below grade level readers, participating in a structured reading intervention with the school's reading specialist. A structured home program was developed to complement the school-based intervention, using the same classroom reading materials. The home program included: modeling and feedback, repeated readings, error correction, and praise and incentives. Parents were trained to use the strategies with their children, and implemented the procedures in their homes for three to four weeks. Parents taped all tutoring sessions. A review of the audiotapes, tutoring logs and checklists, as well as weekly telephone and/or e-mail contact with parents, served to monitor program implementation. The dependent variable was oral reading fluency, as measured by words read correctly per minute and an overall score on a 12-point fluency rating scale. A multiple baseline across participants design was used and results were analyzed using visual inspection and percentage of non-overlapping data points. Although some students showed improvement in reading fluency from baseline to intervention, results could not be attributed to the parent tutoring due to variability in baseline and intervention performance. Generalization to untutored passages at school and in peer-expected books

was assessed, and a follow-up measure was completed with each participant approximately six to eight weeks after the intervention period. A measure of treatment integrity indicated high implementation of the program components by all parents. Exit interviews were completed with each student and parent participant, as well as the classroom teachers. Data collected from parent ratings and exit interviews indicated high acceptability of the intervention. Results of this study were discussed in terms of the feasibility of parents implementing a home tutoring intervention for reading, recommended modifications to the program, implications for generalization to classroom performance, and future research considerations. Limitations to the study included ethnicity and number of participants, training of raters for reliability, and the time of the school year the tutoring program was implemented.

THE EFFECTS OF A STRUCTURED PARENT TUTORING PROGRAM ON  
STUDENTS' READING FLUENCY

By

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## Dedication

First and foremost, I dedicate this dissertation to Mike, Jackson and Jayden...my wonderfully supportive, patient, and understanding family, whose numerous sacrifices made this accomplishment possible.

I dedicate this dissertation to my family, friends, and colleagues who have provided so much support and assistance on this long journey, especially:

My parents, for your constant love and support

Sylvia and Bill, for believing that I could do this and helping me find my way

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## Table of Contents

List of Tables .....	vi
List of Figures .....	vii
Chapter I: The Effects of a Structured Parent Tutoring Program on Students' Reading Fluency .....	1
Research Base for Parent Tutoring .....	2
Framework for Parent Tutoring .....	3
Purpose of Study .....	4
Research Questions .....	5
Definition of Terms .....	6
Chapter II: Review of the Literature .....	8
Background Theory and Research on Children's Reading Development .....	8
Early literacy and family involvement: An overview .....	8
Reading engagement .....	10
Metacognitive strategies .....	12
Reading practice .....	13
Repeated reading .....	14
Reading fluency .....	16
Fluency and comprehension .....	20
Measurement of fluency .....	20
The Role of Parents .....	23
Home-School Collaboration Studies .....	26
Parent involvement studies .....	27
Parent tutoring .....	28
Socioeconomic status .....	30
Parent Reading-Tutoring Studies .....	34
Informal practices .....	36
Formal practices .....	37
Structured program components .....	38
Evidence-Based Parental Instructional Strategies in Reading .....	45
Involving parents in a reading intervention .....	48
Time spent in reading .....	50
Interactive reading behaviors .....	51
Chapter III: Method .....	53
Participants .....	53
Description of students and parents .....	54
Reading levels of the students .....	54
Setting .....	56

Instruments .....	56
Curriculum-based measurement.....	56
Fluency probes .....	57
Oral reading rate .....	57
Fluency rating scale .....	58
Intervention component checklist .....	59
Acceptability ratings.....	59
Reading Intervention: Leveled Literacy Intervention (LLI) .....	60
Program Evaluation.....	62
Parent Home-Based Tutoring Intervention .....	63
Implementation .....	64
Skills selected for training .....	64
Repeated reading .....	65
Metacognitive strategy .....	66
Materials.....	67
Tutoring program materials .....	67
Procedures .....	69
Parent training.....	69
Acceptability of the intervention.....	71
Post-training communication.....	71
Conducting the Parent Home-Based Tutoring Intervention.....	72
Starting parent tutoring.....	72
Selection of home-tutoring materials .....	73
Independent reading level .....	74
Data Collection .....	75
Ruling out performance deficits.....	77
Baseline performance .....	78
Follow-up.....	79
Inter-rater agreement .....	79
Treatment integrity .....	80
Experimental Design.....	81
Chapter IV: Results .....	82
Treatment Integrity .....	82
Acceptability Ratings.....	83
Parent Communication and Feedback.....	84
Parent-Child Interaction .....	86
Reading Fluency .....	89
Intervention Data Results .....	89
Baseline and intervention results for home tutoring .....	90
Effect of parent tutoring on reading fluency of individual students .....	93
Effect of parent tutoring on untutored material .....	94
Baseline and intervention results for LLI books.....	95
Baseline and intervention results for peer-expected books .....	98
Follow-up.....	102

Teacher Feedback .....	103
Chapter V: Discussion .....	104
Discussion of Results .....	104
Parent tutoring program outcomes .....	104
Teacher outcomes .....	105
Explanation of Results .....	105
Parent Feedback .....	109
Student Feedback .....	113
Parent-Child Interactions .....	114
Parent Implementation Differences .....	116
Suggestions for Improving the Tutoring Program .....	117
Shorter passages/fewer books .....	118
Training on prosody .....	119
Schedule for feedback .....	120
Lessons Learned/Practical Implications .....	121
Implications for Future Research .....	125
Limitations .....	127
Conclusion .....	130
Appendices .....	132
Appendix A. Study participation request form .....	132
Appendix B. County reading benchmark levels .....	134
Appendix C. Fluency rating scale .....	135
Appendix D. Checklist of essential program components .....	136
Appendix E. Tutoring log .....	137
Appendix F. Tutoring star chart .....	138
Appendix G. Curriculum-based measurement (CBM) procedure .....	139
Appendix H. Directions for parent tutoring .....	141
Appendix I. Repeated reading procedure .....	142
Appendix J. Reading bookmark .....	144
Appendix K. Parent intervention survey (pre) .....	145
Appendix L. Parent intervention survey (post) .....	146
References .....	147



## List of Tables

1. Fluency Data Collection	76
2. Baseline and Intervention Means and Ranges: WCPM for Home Tutoring	90
3. Baseline and Intervention Means and Ranges: Fluency Ratings for Home Tutoring	93
4. Baseline and Intervention Means and Ranges: WCPM in LLI Books at School	98
5. Baseline and Intervention Means and Ranges: Fluency Ratings in LLI Books at School	98
6. Baseline and Intervention Means and Ranges: WCPM in Second-Grade Books at School	101
7. Baseline and Intervention Means and Ranges: Fluency Ratings in Second-Grade Books at School	101

## List of Figures

1. WCPM for Parent Tutoring by Participant	91
2. Fluency Ratings During Tutoring by Participant	92
3. WCPM in LLI Books for Progress Monitoring by Participant	96
4. Fluency Ratings in LLI Books for Progress Monitoring by Participant	97
5. WCPM in Second-Grade Books for Generalization by Participant	99
6. Fluency Ratings in Second-Grade Books for Generalization by Participant	100

# THE EFFECTS OF A STRUCTURED PARENT TUTORING PROGRAM ON STUDENTS' READING FLUENCY

## Chapter I

Collaboration between home and school can enhance the efforts of both in developing children's reading abilities and their attitudes toward reading (Ollila & Mayfield, 1992). Topping and Wolfendale (1985) identified parent involvement as one characteristic of a successful school reading program. Reading with children at home, either reading aloud to them or listening to them read, is the literacy activity most frequently recommended to parents by classroom teachers (Epstein & Dauber, 1991).

Research supports that most parents provide help at home with or without explicit direction from teachers; however, they may wonder if they are doing the right things and desire more information about specific skills needed for their child's academic success (Epstein, 1987). In terms of reading skill development, parents may need more guidance from teachers about what, how much, and how long to read at home, what to do when their child makes a mistake, how to discuss the material, and how to create a positive reading experience (Smith, 1988). With specific knowledge and support, parents may be better prepared to help their child read at home.

The current study considered how to connect and extend research-based strategies for reading into the home setting and, conversely, how to best involve parents in a reading intervention provided at school. The purpose of the study was to determine whether implementing a structured tutoring program at home, that supported the school-based reading program, would lead to improved reading fluency for a group of second grade students reading below grade level. The tutoring program, to be implemented daily

by parents, was designed to accompany the instruction and use the same materials from the student's daily reading intervention with the reading specialist. I thought that a structured reading program with explicit materials, training, and follow-up provided, that was relatively easy for parents to implement in a short period of time, would lead to improved reading performance on tutored materials and school-based measures.

### **Research Base for Parent Tutoring**

Several studies have indicated success with parents learning to tutor their children at home, particularly focused on a specific academic behavior or skill (Leach & Siddall, 1990; Rasinski & Stevenson, 2005). Research suggests that parent tutoring is a way to increase the amount of time that children are engaged in an academic task. Increasing their opportunity to respond and engage in a particular academic task at home is thought to enhance skill development and achievement, providing support for success at school (Duvall, Delquadri, Elliott, & Hall, 1992). However, without involvement from school staff and specific procedures to follow, parents may feel frustrated or inadequate in helping their children at home (Thurston & Dasta, 1990).

More formal parent tutoring programs involve opportunities for guided practice with feedback and direct instruction of specific skills, with parents being trained to implement the procedures and supported during the tutoring period at home (Duvall et al., 1992; Leach & Siddall, 1990). In terms of home-based tutoring interventions, research indicates that programs incorporating specific objectives, structured materials, explicit training of parents with practice and immediate feedback provided, use of positive reinforcement, and progress monitoring of both implementation and student

performance, have been most effective (Leach & Siddall, 1990; Neidermeyer, 1970; Rasinski & Stevenson, 2005).

### **Framework for Parent Tutoring**

Leichter's (1984) three-part model of home influences on children's literacy development provided a framework for the necessary elements to consider and include in developing a parent tutoring program for reading. The *physical resources* needed to insure learning opportunities should be provided to parents and children (i.e. implementation guides and scripts, tutoring materials and logs). Teachers can provide parents with specific strategies to use, so that time spent reading at home can be most effective (Learning First Alliance, 1998). In terms of *interactions with others*, children reading daily with a parent, engaging in repeated readings, and thinking and talking about what they have read can lead to positive interactions. Through joint book-reading, sharing personal reactions to text, and relating concepts to personal experiences, parents can foster positive attitudes toward reading, and perhaps assist children in reading more often and becoming better readers (Morrow, 1990). Reading interventions that provide opportunities for skill development and extra practice can possibly change the outcome of poor reading achievement for struggling readers (Rasinski & Stevenson, 2005).

The *emotional climate* at home was presumed to positively support the child's literacy development through daily one-to-one attention, increased interest in the child's reading performance, and frequent opportunities for praise and encouragement. Parents can promote positive attitudes by modeling appropriate reading behaviors and showing enthusiasm when reading. Parents can stress the importance of reading, set clear expectations and routines, and reinforce progress toward reading goals (Ollila &

Mayfield, 1992). Using incentives such as a sticker chart, prize box, and/or linking home reading to a meaningful reward at school, could foster a positive emotional climate and help to increase the child's motivation during a parent tutoring intervention. In summary, children's literacy development could be enhanced by educating parents about components and effective strategies that could improve literacy practices in the home, and assisting them in applying such strategies in an effort to improve reading outcomes at school.

### **Purpose of Study**

The current study examined how to connect and extend research-based strategies for reading to the home environment and, conversely, how to best integrate the parents/families of students performing below grade level into the reading intervention provided at school. The purpose of the study was to determine whether implementing a structured tutoring program at home leads to greater reading fluency at school for a group of second-grade students reading below grade level. The tutoring program, to be implemented daily by parents, was designed to accompany the instruction and use the same materials from the student's daily reading intervention with the reading specialist. I thought that a structured reading program with explicit materials, training, and follow-up provided, that is relatively easy for parents to implement in a short period of time, would be advantageous over the current expectation for parent involvement in the child's reading intervention at school, and would lead to improved reading scores on outcome measures. If a structured home-based reading program can demonstrate meaningful increases in students' reading skills, it may provide support for expanding the parent-tutoring program to other struggling young readers and their families. Additionally, a

successful home-tutoring reading program would comply with school district mandates for both reading achievement and parental involvement.

### **Research Questions**

The present study involved four elementary school students receiving similar classroom reading intervention with the reading specialist. A parent-tutoring program was designed and implemented, incorporating components of literacy development theory, home influence models, and research on parent involvement and instructional strategies in reading.

The study was designed to answer the following questions:

1. To what degree can parents implement all components of a home-based tutoring intervention?
2. How consistently can parents implement a home-based tutoring intervention, as designed, for 15 minutes per night, five days per week, for a period of at least three weeks?
3. To what degree do parents find the tutoring program acceptable as a home-based intervention?
4. Does adding a parent home-based tutoring program to a school-based reading intervention increase students' reading fluency (i.e. reading rate, accuracy of word recognition, and prosody) in tutored books?
5. Does adding a parent home-based tutoring program to a school-based reading intervention increase students' reading fluency (i.e. reading rate, accuracy of word recognition, and prosody) on untutored reading material and peer-expected classroom books?

6. Do the students' classroom teachers report change in reading fluency (i.e. reading rate, accuracy of word recognition, and prosody) following the parent tutoring intervention?

### **Definition of Terms**

*Fluency:* Fluency is a reading skill that combines accuracy of word recognition, reading rate, and prosody. *Fluency* is demonstrated during oral reading through rate and accuracy, as well as phrasing, intonation, pausing, stress and pace, and the integration of these factors (Fountas & Pinnell, 2009). For this study, fluency will be operationally defined as a student's oral reading rate in terms of words read correctly per minute (WCPM), and their reading prosody in terms of a fluency rating score on a 12-point scale that measures their phrasing/expression, pace, and smoothness.

*Accuracy of word recognition:* When reading aloud, the percentage of words the child reads correctly from a given reading selection.

*Reading rate:* The number of words a child reads per minute, either orally or silently; speed or pace while reading. For the current study, errors will be subtracted from the total words read orally in a given reading selection, to determine the number of words read correctly per minute (WCPM).

*Prosody:* The way oral reading sounds, including pace, phrasing, pausing, intonation, stress, and the integration of these factors; the expression with which one reads text aloud.

*Parent home-based tutoring intervention:* This was the independent variable in the study and consisted of all the procedures and materials used at home during the tutoring sessions. These procedures were taught to the parents during a training session.



The home-based tutoring intervention included using a tape recorder to record each tutoring session, engaging in a repeated reading strategy, using a reading bookmark with questions to think about when reading, providing the child with rewards and incentives following the repeated readings, and completing a tutoring log sheet.

*School-based reading intervention:* This intervention was the Leveled Literacy Intervention [LLI] (Fountas & Pinnell, 2009) reading program implemented at school by the reading specialist.

*Untutored reading material:* Any reading selection not used in tutoring at home, and includes books used at school during both group reading intervention and classroom instruction.

*Peer-expected books or materials:* Books that students are expected to be reading in the second-grade curriculum, and that are used during instruction in the regular second-grade classroom.

*Reading passage:* A reading selection of at least 100 words taken from an LLI or classroom reading book, to be used for an oral reading fluency probe and/or the measurement of words read correctly per minute.

*Acceptability:* A tutoring intervention that parents would be willing to use at home and was considered reasonable and beneficial for improving a child's reading skills. Acceptability was determined by parent survey results both before and after the implementation of the parent home-based tutoring intervention.

## Chapter II

### Review of the Literature

For this study, the key issues addressed in reviewing the literature will be the importance of family and parent involvement in the development of children's literacy skills, in their learning and education in general, and in the implementation of effective interventions for reading skill improvement in particular. The development of reading fluency, including methods of assessment, will be explored. Studies of home-school collaboration, parent involvement, and parent tutoring will be reviewed. Studies comparing various methods of parent tutoring in the area of reading fluency skills, including informal and formal procedures, and evidence-based reading strategies will be highlighted. Finally, the critical components of effective home-based tutoring programs will be discussed and those included in this study will be identified.

### Background Theory and Research on Children's Reading Development

**Early literacy and family involvement: An overview.** Because parental involvement is the focus of this study, this background theory section begins with an overview of early literacy and family involvement before proceeding to an overview of more basic theory and research on reading. Early literacy skills, broadly defined as all experiences related to oral and written language, are essential if children are to enter school ready to learn. It is widely recognized that the home environment exerts a strong influence on early reading skills by providing opportunities for language and literacy development within a social context (Baker, et al., 1994; Morrow 2001; Sulzby & Teale, 1991). Since children acquire literacy concepts, skills, and knowledge by interacting with and exploring their environment and observing others engaging in literate behaviors,

there is a need for both formal and informal home literacy practices (Clay, 1993; Vernon-Feagans, et al., 2004; Wasik & Herrmann, 2004). Family literacy is considered the level at which family members use their own literacy skills (i.e. reading, writing, computing, problem solving, and communication skills) to perform various daily tasks (Wasik & Herrmann, 2004). In order for parents to assist their children in developing good literacy habits that lead to improved understanding and critical thinking, consistent use of effective reading strategies, and the motivation to read and learn, parents must establish these habits in themselves (DeBruin-Parecki, 1999).

Literacy development depends on children engaging with print on a regular basis (Baker, Sonnenschein, & Serpell, 1999). Parents are encouraged to provide a literacy-rich home environment, where children can be immersed in quality books and materials that encourage language exploration, and create positive attitudes toward reading and a propensity to read that will lead them to be more successful future readers (Morrow, 2001; Stegelin, 2002). Although having appropriate reading materials available to children is important, the daily routines that parents and other supportive adults establish to encourage literacy development are just as important (Stegelin, 2002).

For decades, academic research and the popular media have highlighted the benefits of reading to young children, with many educators and government programs urging parents to make this activity a part of their daily routine (DeBruin-Parecki, 1999). Parents can foster positive attitudes toward reading, and perhaps assist children in becoming better readers, by making shared book reading an enjoyable learning experience. The goals of family literacy and parent involvement programs are to encourage frequent, positive, and interesting reading experiences for children and also to

consider how children respond during joint book reading (Morrow, 1990). DeBruin-Parecki (1999) posited that the quality of the reading between a parent and child has a large effect on emergent literacy. It is important to determine how well adults are engaging and teaching children as they read, and how well children are listening and responding during reading.

DeBruin-Parecki (1999) designed a tool to measure the quality of the adult-child interactions during joint book reading, called the Adult-Child Interactive Reading Inventory (ACIRI). The ACIRI helps parents promote the development of emergent literacy skills by identifying and measuring critical reading behaviors during observations of the parent-child interaction. The empirically supported reading behaviors are grouped into three categories: enhancing attention to text, promoting interactive reading and supporting comprehension, and using literacy strategies. These types of interactive behaviors can be taught to parents and encouraged when reading in the home environment, across cultural contexts. Although some parents were uncomfortable being watched by an instructor, a data analysis of the measure indicated positive results for both parents and children, with the adults learning where they needed to improve their skills when reading with their children (DeBruin-Parecki, 1999).

**Reading engagement.** The recognition that reading is an important activity and skill to develop initially depends on the adults in a child's environment. The foundation for learning to read begins in the home and is nurtured as the child develops and attends school (Ollila & Mayfield, 1992). Home environments in which books are a part of daily life, parents read books themselves and devote attention to reading, and parents share in reading books with children, help children to incidentally acquire the skills necessary for

reading (Jones, 1981). Compared to disengaged readers, children considered “engaged” in reading spend much more time reading, up to 500% more time (Guthrie, 2004). This may create differences in achievement gains between engaged and disengaged readers. The correlation between the indicator of engaged reading and reading comprehension achievement for nine-year-olds on the National Assessment of Education Progress (NAEP) report was higher than any demographic characteristic such as income, ethnicity or gender (Guthrie, Schafer, & Huang, 2001). A more important finding was that the nine-year-olds with family backgrounds characterized by low education and low income, but who were highly engaged readers, substantially outscored less engaged readers from higher income and higher education backgrounds. This finding suggests that engaged reading can overcome traditional achievement barriers such as parental education and income level (Guthrie, 2004).

According to engagement theory, readers who are engaged are intrinsically motivated to read and so read for their own enjoyment. They read frequently, and may choose to read during their free time. Teachers can implement practices in the classroom that support intrinsic motivation, such as selecting texts that are relevant to students’ interests and connect to their backgrounds. Teachers who include books, materials, and references specific to the cultures represented in their classrooms are more likely to engage their students (McRae & Guthrie, 2009). By personally connecting to the information presented, students can bring their own background knowledge to the reading task, which can lead to increased comprehension. Through repeated experiences of relevance in the learning task and/or reading activity, students can increase their interest, motivation, and engagement (McRae & Guthrie, 2009). Engaged readers tend to be

social about reading, sharing ideas and talking to others about what they are reading and learning. Engaged readers also tend to be mentally active while reading, using metacognitive strategies to build their conceptual understanding of text (Tracey & Morrow, 2006).

**Metacognitive strategies.** Thinking about one's own thinking, or metacognition, was introduced in the 1970s and applied to children's ability to be aware of their cognitive processes. Interest in metacognition with regard to reading arose from Durkin's (1977-1978) research that traditional, directed classroom reading lessons were not effective in promoting independent comprehension of text. Rather than depending on the teacher, students need to learn tools they can apply to comprehend the information they read. Researchers found that proficient readers use metacognitive strategies during reading that help them to understand the material (Pressley, 2000). Proficient readers, for example, are aware of whether or not they understand what they are reading; and if not, they employ strategies to help them, such as slowing down, re-reading or looking up the meaning of words they don't know. Proficient readers also tend to engage in self-questioning, summarizing and visualizing while they read (Brown, 2002). Research has shown that although good readers tend to use metacognitive strategies effectively, poor readers have less metacognitive awareness compared to their higher achieving peers (Baker, 2002).

These findings have led to the development of metacognitive instruction to help readers become actively aware of their thinking processes during reading. Through explicit instruction, modeling, and guidance on when and how to apply reading strategies, educators attempt to gradually transfer the responsibility of monitoring and

comprehending what is read from the adult to the child (Baker, 2002). Metacognitive comprehension skills can help dependent readers become more actively involved and self-aware when reading, possibly building their confidence as engaged and more successful learners. Reminders of metacognitive reading strategies can be posted on classroom walls or laminated as individual bookmarks, to promote independent application of the skills taught (Tracey & Morrow, 2006).

By using metacognitive strategies at home, parents can model for children that reading is an active process, involving paying attention to the text, integrating it with prior knowledge, linking to personal experiences, and applying literacy strategies (DeBruin-Parecki, 1999). Denton and Hasbrouck (2000) noted that when listening to children read, parents can provide support by helping them know what to do when they get to a “hard part” in the text or become stuck on an unknown word. They can remind the child to apply decoding strategies, or to think about what word would make sense in the context of the sentence. Good readers should ask themselves key questions as they encounter an unknown or unfamiliar word when reading: (a) does it make sense? (b) does it sound right? (c) does it look right? This strategy can be used to promote active thinking about what is being read and flexibility for rapid word solving. It can also support reading comprehension and the application of phonics skills and decoding strategies (Fountas & Pinnell, 2009).

**Reading practice.** Allington (2009) investigated whether struggling readers should have greater opportunities to engage in reading connected text, and specifically how much reading practice and what sorts of practice foster proficient reading. There is evidence to support that reading texts with high levels of accuracy (above 95% of words

read correctly) promotes reading development and engagement in children to a greater extent than using more challenging materials (Allington, 2009). A primary reason is that it takes many successful repetitions of a word before readers can recognize it immediately (Nathan & Stanovich, 1991). Allington (2009) argued that struggling readers encounter reading materials every day, and perhaps many times a day across classes, that are too difficult to read at an appropriate level of accuracy (below 95-98%). Since they are more likely to misread words and may not have a large store of known words (those easily recognized), they have a harder time becoming fluent readers. Too little reading practice, combined with too little *successful* reading practice, contributes to children having large gaps in reading skills that are difficult to overcome. Allington (2009) further asserted that increasing the amount of high success reading (above 98% accuracy) opportunities for struggling readers will likely help foster improved reading skills.

**Repeated reading.** Repeated reading is an evidence-based strategy for promoting automaticity of skills, frequent practice, and controlled difficulty of the reading materials used. Novice readers need opportunities to read in context and hear what fluent reading sounds like, while not becoming frustrated by overly challenging text or decoding too many unknown words (Baker, Sonnenschein, & Serpell, 1994; Rasinski, 1990). By listening to adults read with expression, students learn how the reader's voice helps written words and text make sense. Nathan and Stanovich (1991) reviewed a one-year study examining the importance of modeling fluent reading with second-grade students, using 10 experimental classrooms and 10 control classrooms. In the experimental classes, teachers read aloud for approximately 20 minutes daily, after which



the children participated in a related activity (e.g. drawing a scene from the story). At the end of the school year, the experimental group performed significantly higher than peers in the control group on measures of reading vocabulary and reading comprehension. The findings suggested that fluency was enhanced by practice, which led to growth in other reading skills.

To develop oral fluency, students should not only hear fluent reading modeled frequently, but should reread the same material several times for practice. If the purpose of an intervention is to improve reading fluency, then a repeated reading intervention should include corrective feedback, a cue for speed, and a performance criterion, such as a predetermined time period or a fixed number of words read per minute (Therrien, 2004). Research suggests that four repeated readings are sufficient to increase fluency for most students (Armbruster et al., 2001). In a meta-analysis to determine the essential instructional components of repeated reading, Therrien (2004) found that when students read a passage more than once, they read it with greater fluency and comprehended it better. Additionally, rereading a passage three or four times resulted in 30% greater improvement than only reading it twice. The author determined that reading a passage four times was slightly better than three, but that more than four times did not result in a significant increase in performance on outcome measures of reading comprehension. Although most repeated reading interventions in Therrien's meta-analysis lasted 45 sessions or less, no minimum criterion for length of intervention was determined.

The literature on the efficacy of repeated reading spans over 30 years, since LaBerge and Samuels posited their theory of automaticity of reading fluency in 1974, and Samuels introduced the practice of repeated readings in 1979. More recently, Chard,

Vaughn and Tyler (2002) reviewed multiple studies involving repeated reading interventions, including repeated reading with a model. In this strategy, students read a passage after hearing a model read the same passage. They concluded that repeated reading with a model, particularly a teacher, was an effective method for increasing reading fluency and seemed to be more effective than repeated reading without a model.

Some recent researchers have found combining repeated readings with corrective feedback to be an essential component in improving reading fluency (Therrien, 2004). Providing only corrective feedback without repeated readings does reduce the number of errors per minute a student makes when reading the passage. However, this strategy is not found to have a significant effect on fluency rates, unless combined with repeated readings (Nelson, Alber & Gordy, 2004). In repeated reading with error correction, the teacher or another adult provides correction when a student mispronounces a word, omits a word, or indicates the need for assistance. The error correction may be provided immediately or given after the student has read the entire passage (Heller, Rupert, Coleman-Martin, Mezei, & Calhoon, 2007).

**Reading fluency.** Reading fluency is the ability to simultaneously decode and comprehend text (Samuels, 2006). Fluent word recognition is considered by some experts to be the bridge between letter-sound correspondence (phonics) and understanding what is read, and perhaps a necessary condition for good comprehension of text (Armbruster, Lehr, & Osborn, 2001; Nathan & Stanovich, 2001). Although fluency has often been described in the literature as the ability to read quickly and accurately (Armbruster, Lehr, & Osborn, 2001; LaBerge & Samuels, 1974; Stanovich, 1986), growing consensus identifies three primary components of fluency: accuracy,

automaticity, and appropriate prosody (Kuhn, Schwanenflugel, & Meisinger, 2010; National Institute of Child Health and Human Development [NICHD], 2000). More specifically, *prosody* is related to pitch, stress, phrasing, and expression; the melody of oral reading such that one's reading sounds like spoken language (Rasinski, Rikli, & Johnston, 2009; Stahl & Kuhn, 2002). Fluent readers are able to recognize most words in connected text quickly and accurately and are able to read aloud with appropriate pacing, phrasing and expression, at a conversational rate. (Hudson, 2006; Kuhn et al., 2010).

A fluent reader appears to manage many processes with relative ease (Hudson, 2006). When reading silently, fluent readers recognize most words effortlessly and automatically, and do not need to concentrate on pronouncing or sounding out words (a process called *decoding*). This is related to LaBerge and Samuels' (1974) theory of automaticity in reading. When performing two processes at once, such as decoding and comprehending, one of them must be automatic. Since readers must pay attention in order to monitor and comprehend what they are reading, word recognition is the process that should be automatic (Hudson, 2006). Early attainment of decoding is important and accurately predicts later reading comprehension skill. Children who get off to a slow start in reading rarely become strong readers (Stanovich, 1986). Since strong readers tend to read more often and read a wider variety of materials, this may impact future opportunities of poorer readers, and limit their growth in vocabulary, concepts, and knowledge of text and text features (Samuels, Schermer, & Reinking, 1992).

Attention is required for decoding and comprehension regardless of whether the child is a fluent or a beginning reader (Samuels et al., 1992). With automaticity accounted for, however, fluent readers are able to spend more time thinking about what

they are reading; making connections between ideas in the text and linking what they read to their background knowledge, all leading to deeper understanding and comprehension. Conversely, less fluent readers may be focusing so much attention on decoding the words that they are unable to concentrate on the meaning of the text or on making connections to their background knowledge and experiences (Armbruster, et al., 2001; Padak, Rasinski, & Mraz, 2002).

When reading aloud, fluent readers generally use good phrasing, intonation, and expression. The oral reading of a less fluent reader may sound choppy, with limited inflection or a monotone voice. Since less fluent readers often struggle to figure out and pronounce individual words, they may read at a very slow rate, sometimes word by word (Armbruster et al., 2001). Even when their comprehension of a reading selection was satisfactory, Rasinski (2002) found that students referred to a university reading clinic tended to exhibit “slow, labored, inexpressive and unenthusiastic” oral reading (p. 1). The ability to read with expression may have an impact on the reader’s engagement in and motivation toward reading (Rasinski et al., 2009).

Reading fluency is not a stationary skill or a single stage of development. It changes depending on the text being read, a student’s familiarity with the words and concepts, and his or her amount of practice with the text. Even a skilled reader may struggle and read slowly in material that is too difficult or unfamiliar, such as a technical manual or medical journal (Padak et al., 2002). There are times when a slower rate of reading is needed to promote comprehension and meaning. Skilled readers tend to vary their reading rate as a function of the complexity of the material; they learn to read with flexibility, rather than merely speed (Kuhn et al., 2010).

A reader may be able to recognize many words quickly and yet still not read with expression (Armbruster et al., 2001). To read a passage with proper expression, the fluent reader divides the text into phrases and meaningful chunks, and uses punctuation appropriately. A fluent reader attends to text features, knows when to change emphasis and tone, and pauses as needed within and at the end of sentences (Armbruster et al., 2001). These sub-skills of fluent reading mesh and proficiency develops through practice. With repetition over time, reading becomes easier, speed increases, and the reader pays less attention to the process of reading (Wolf & Katzir-Cohen, 2001).

As discussed above, the ability to quickly recognize words in isolation is a necessary but not sufficient skill for developing reading fluency. Over the years, research has indicated that fluency is a separate component of reading that can be increased through instruction (Armbruster et al., 2001). Rasinski (1990) asserted that the skill development needed to foster reading fluency is sometimes neglected in classroom reading programs, where instruction in basal readers tends to focus on word elements and words in isolation, rather than connected text. A novice reader needs opportunities to read in context and to hear what fluent reading sounds like. Nathan and Stanovich (1991) reviewed a one-year study examining the importance of modeling fluent reading with second-grade students. The findings suggested that fluency was enhanced by practice, which in turn led to growth in vocabulary development and improved comprehension. Practice is considered a critical element of fluency in terms of both theory (LaBerge & Sameuls, 1974) and instruction (Rasinski, 1990). By listening to adults read with expression, students learn how the reader's voice helps written words and text make sense. To develop oral fluency, students should hear fluent reading modeled frequently,

and reread the same material several times for practice. These findings have implications for involving families in providing support and extra practice at home to enhance their children's reading skill development.

***Fluency and comprehension.*** As early readers develop familiarity with words, their word recognition becomes more automatic; the attention they previously had to focus on word recognition is available for the construction of meaning (Kuhn & Schwanenflugel, 2009; Samuels, 2006). Since fluent readers are not only automatic but also more accurate, they are typically better able to comprehend text than less fluent readers. As previously indicated, fluent readers also demonstrate better prosody. If reading is not automatic, it is difficult to read orally with expression. As reading skill develops, students move from monotonous, word-by-word reading to more fluid phrases and appropriate expression. Fluent readers eventually transfer elements of oral language to print and engage in what sounds like good reading to the listener (Dowhower, 1991; Kuhn & Schwanenflugel, 2009). The relationship between reading prosody and comprehension is unclear in the literature. Does comprehension need to occur before the elements of prosody can be applied, does prosody contribute to reading comprehension, or is the relationship reciprocal (Kuhn & Schwanenflugel, 2009)? What *is* clear in the literature is that prosody is an essential part of fluency development and should be considered whenever reading fluency is measured.

***Measurement of fluency.*** Discussions of oral reading fluency in terms of instruction and assessment tend to focus on decoding speed at the expense of prosody, typically measuring only words read correctly per minute to reflect a child's fluency skills (Kuhn et al., 2010). This often has the effect of students being asked to read as

quickly as possible rather than at an appropriate conversational rate. For example, in the meta-analysis by Therrien (2004) the types of reading cues given to students were determined for each study depending on the purpose of the repeated reading; students were either cued to read for speed, for comprehension, or for both. Prosody and/or expression were not mentioned in the given reading cues. According to Kuhn et al. (2010), asking children to read text quickly and accurately has a natural effect of less expressive reading, as children are generally not able to read both quickly and with adequate prosody, particularly younger readers.

Although the definitions and literature presented thus far have incorporated prosody as one of three primary elements of reading fluency, few studies address how to measure it. Most research on fluency has used reading rate as the measurement of this reading skill, as well as reading achievement in general (Deno, Mirkin, & Chiang, 1983; Marston, 1989; Rasinski et al., 2009). Although an appropriate measure of automaticity in word recognition, rate does not capture the prosodic aspects of reading and so does not provide an entire picture of reading fluency (Rasinski et al., 2009). Kuhn et al. (2010) noted that there are only two ways to measure prosody: rating scales and “spectrographic measures” (related to sound waves). The NAEP Oral Reading Fluency Scale appears to be the most common rating scale; this 4-point scale is used often for evaluation in the classroom (Pinnell et al., 1995).

Rasinski et al. (2009) assessed fluency development amongst third, fifth, and seventh grade students using prosody (defined as expressiveness in oral reading) instead of reading rate (defined as word recognition accuracy) as a measure of student’s reading fluency. Reading passages were selected from grade level books; two passages for the

elementary grades and one for grade 7. After reading the passage silently first, students were instructed to read orally “using their normal and expressive voice” (Rasinski et al., 2009, p. 355). A one-minute oral reading was electronically recorded via computer for each student. Findings indicated moderately strong correlations between fluency and silent reading comprehension on standardized achievement tests for readers in all three grades. In the Rasinski et al. study, fluency was measured using the Multi-Dimensional Fluency Scoring Guide (MFSG, Zutell & Rasinski, 1991), which is a rubric for teachers to use in assessing student’s reading expression or prosody in oral language. The MFSG employs a 4-point scale to distinguish the prosodic elements of a child’s reading in three areas: phrasing and expression, accuracy and smoothness, and pacing (Rasinski et al., 2009). The subscale points are summed to provide a single rating of reading fluency. The findings from their study lend support to viewing prosody as an important element in reading fluency, even in higher grades, and for the inclusion of prosody in the measurement of and instructional practices involving fluency skills.

In the Rasinski et al. study (2009), raters were trained to use the scoring guide by analyzing a set of sample (“anchor”) readings for each of the three prosody characteristics at each grade level. The readings were chosen by a large group of raters who had previously been trained on the measure by listening to and rating samples from a pool of 100 passages. Samples with the highest inter-rater agreement were then chosen as anchor passages, to be used for future trainings on the fluency ratings. Raters in this study also practiced rating samples in small groups; they worked until agreement was reached. Although Rasinski et al. reported 86% inter-rater agreement within two points, much training is obviously required to use the fluency rating scales with adequate



reliability. On a revised version of the Multi-Dimensional Fluency Scale, including a 4-point rating considering expressiveness across the entire reading passage, Klauda and Guthrie (2008) reported 79% inter-rater agreement, again within two points. Although fluency rating scales may not have sufficient reliability to measure reading fluency as precisely (or easily) as speed and accuracy, they are the most practical tool available for their purpose and should continue be researched (Kuhn et al., 2010).

Providing guidance and monitoring to students during reading supports fluency development. Students who read and reread passages aloud as they receive feedback from an adult became better readers (National Institute of Child Health and Human Development [NICHD], 2000). Additionally, the more a child hears fluent reading, the better for promoting fluency development. A model reader provides natural phrasing and rate, automatic word recognition, and proper expression, all of which impact fluent reading. However, reading to children can also increase their vocabulary, background knowledge, familiarity with words and written language, and interest in reading (Armbruster et al., 2001). Research suggests that parents and family members can have a substantial impact on their children's development of fluency by modeling and encouraging reading, and providing opportunities to practice. To enhance literacy, parents may need to be informed of the necessary components for improving reading skills and home literacy experiences.

### **The Role of Parents**

A child's first teacher is his or her parent. The family plays a primary role in child development, providing the socio-cultural context and foundation for learning (DeBruin-Parecki, 1999). In the early to mid 1900s, Vygotsky's (1978) theories

delineated the contextual nature of learning and the importance of one's family and culture. These supportive interactions between the adult and child, termed *scaffolding* (Wasik & Herrmann, 2004), are used in educational settings to help the child bridge the gap between current performance and the desired or expected performance of a skill. Scaffolding in the home environment may involve parents supporting their children by structuring a task or engaging in a discussion about it, so that the child is better able to complete the task (Snow, 1983).

Supportive interactions between parents and children can be examined in terms of Bronfenbrenner's (1979) ecological framework, which posits that human development occurs within a context of interdependent systems. These overlapping systems of cultural and social organization include the *microsystem*, *exosystem*, and *macrosystem*. A child's home environment is the primary *microsystem* for daily interaction and influence. Microsystems are the day-to-day settings that a child participates in and include the home, immediate family members, child-care or day-care center, neighborhood, school, church and/or extended family. Each setting may include different peers and adults, as well as different expectations and demands. The connections between settings are called *mesosystems* and include the relationships among the people in those settings and between the settings themselves, as well as belief systems, attitudes, and other elements that directly impact children (Vernon-Feagans, Head-Reeves, & Kainz, 2004). The better the connections among the settings of the microsystem, the better the child can transition from one setting to another. For example, the more the attitudes and beliefs of the adults in the family system match those of the adults in the school system, the better the child can adapt in both settings.

As the proximal influence of the microsystem implies, the experiences of children in their home environment is an important precursor to building connections between home and school settings (Baker, Sonnenschein, & Serpell, 1994). A child's education starts at home, with the primary caregivers providing a healthy, loving environment and developmentally appropriate learning experiences and opportunities (United States Department of Education, 2007). The home environment exerts a powerful influence on the development of early literacy skills, well before a child enters formal schooling (Sulzby & Teale, 1991). This recognition of the importance of the home setting in children's literacy development has been receiving support for over 40 years (Wasik & Herrmann, 2004). In the 1980s, researchers provided additional support for understanding literacy development as an ongoing process that takes place over time, contributing to a theoretical shift toward an emergent literacy approach. Examining children's literacy experiences and providing support to families within the home system is important in building connections between home and school that foster improved academic performance (Baker et al., 1994; Sulzby & Teale, 1991).

The importance of parental involvement in children's education, as well as potential barriers to the home-school relationship, began appearing in journal articles in the 1970s, and empirical studies emerged in the 1980s and 1990s (Cox, 2005). However, many researchers at that time still considered the home and school to be independent settings for the child, rather than interdependent, overlapping systems. In a rare study from the early 1980s, Collins, Moles and Cross (1982) reviewed 28 home-school partnership programs implemented during the 1980-81 school year, and concluded that the programs resulted in higher academic achievement, lower absentee rates, improved

student conduct, and greater parent participation. A focus on home-school partnerships was underway in the literature by the 1990s, consistent with the view of a shared responsibility between schools and families in educating children (Epstein, 1992).

### **Home-School Collaboration Studies**

Cox (2005) reviewed 18 empirical studies, primarily from the 1980s and 1990s (with one from 2000), of home-school collaboration interventions that measured a school-based outcome. It was concluded that such interventions were effective in helping children to achieve desired academic and behavioral outcomes at school. In a descriptive review, McCarthy (2000) examined home-school collaboration strategies with a focus on promoting children's literacy in the home environment. The author found several effective home-school practices, including: gathering information on home literacy activities through home visits; sending books and other materials home to families; keeping portfolios of students' literacy growth that parents could share with teachers; and documenting home practices in order to inform literacy instruction at the school.

Home-school collaboration and parent involvement are two terms used in the literature, sometimes interchangeably. However, a key distinction between them is the nature of the relationship. Parent involvement is typically a one-way flow of information between schools and parents, whereas home-school collaboration involves a two-way exchange of information (Christenson, Rounds, & Franklin, 1992). In addition, parent involvement focuses on just that, parents becoming more involved in their child's education, while home-school collaboration focuses on the joint involvement of parents and school personnel in children's education (Cox, 2005). Parent involvement is usually a nonspecific intervention, and may include meeting school-related needs (e.g. supplies,

materials, a home work space), maintaining communication with teachers, participating in school groups (e.g. PTA), providing service to the school (e.g. committees, classroom volunteer), and providing direct service to students outside of the school setting, such as tutoring (Epstein, 1987). Although some of the activities may overlap and look the same, home-school collaboration differs from parent involvement in terms of the philosophy of working toward a common goal with shared power between the school/teacher and home/parent (Christenson et al., 1992). The current study linked the two by providing home tutoring in a specific academic area with frequent communication between school and home.

In the Cox (2005) analysis of home-school collaboration interventions, the most effective interventions were those that involved communication between home and school, and where parents and school personnel worked together to implement the intervention and maintained a two-way exchange of information. Among the articles reviewed, the strongest evidence for significant child outcomes was a family literacy program described by Morrow and Young (1997). These researchers sought to increase children's interest in literacy and their reading achievement. With a population of students at risk for academic and social difficulties, they employed a school-based literacy program along with a family literacy program. Through the collaborative effort between the children, parents, and teachers, parents participated in more literacy activities at home and became more involved with their child's school. Collaborative home-school practices appear to hold promise for positive child outcomes.

**Parent involvement studies.** By comparison to the studies on home-school collaboration, the interventions related to parent involvement in children's learning are

less empirically supported, though effective components may be identified for further study. Fishel and Ramirez (2005) reviewed 24 studies of parent involvement conducted between 1980 and 2002. The parent involvement component was primarily related to helping children learn at home, with a focus on improving academic performance (e.g. reading, spelling, math, work completion). Despite some promising findings in support of home tutoring, this comprehensive review found insufficient evidence to conclude that parent involvement in general was an effective method of intervention. The strongest evidence was found for programs that implemented parent tutoring at home with elementary-aged students, and targeted a single academic problem, particularly reading and math skills. Across all reviewed studies, Fishel and Ramirez (2005) found consistent methodological weaknesses including lack of a clear link between key outcomes and the parent involvement interventions, and a failure to report effect sizes. Methodological strengths included adequate descriptions of the procedures used and documentation of the program components.

**Parent tutoring.** Parent tutoring involves professionals, such as teachers or other school staff, teaching parents how to instruct their child in an academic skill area within the home setting (Shapero & Forbes, 1981). Shapero and Forbes (1981) reviewed studies employing a true experimental design and those considered nonexperimental. Although the populations studied, methodology, and evaluations used were varied, the results suggested that parents *can* be trained to be effective tutors for their children. Kramer (1990) reviewed specific techniques and methods of training and found that modeling and direct instruction was more effective than textbooks, self-help manuals, or lectures in creating behavior change for the tutor. It appears that the opportunity to practice a new

skill and receive corrective feedback from a trainer is the important piece in terms of the effectiveness of these various training methods.

Given the inherent opportunities for supportive parent-child interactions and modeling of literacy behaviors, home-based tutoring is one parent involvement strategy with great potential to improve skill development and student achievement (Powell-Smith, Stoner, Shinn, & Good, 2000). Parent tutoring provides one-to-one assistance and increased opportunities to practice important academic skills. Tutoring by a parent for only 10 to 15 minutes per night would provide at least an extra 30 hours of individualized assistance during a school year (Wedel & Fowler, 1984). Children's literacy experiences can be greatly impacted when parents are educated about how to assist their children. In addition to achievement gains, benefits of parent tutoring include increased interaction time with parents and increased self-efficacy of the learner (Brandt, 1989). Both children and parents report that they enjoy participating in tutoring activities (Stacey, 1991). Topping and Whiteley (1990) reviewed feedback questionnaires and found that more than two-thirds of the children involved in a parent-tutoring program wanted to continue with the program at termination. In the same study, over 90% of the tutees indicated improvement in their reading skills, and 78% of the parents reported that their children were more confident readers following program implementation.

Most parents are eager to become involved and are interested in helping their children improve academically. Goldberg (1987) asserted that the parents of good readers and those of poor readers hold the same beliefs about reading and the reading development of their children; namely, they agree that reading is valued. What may differ between these groups of parents are their reading practices at home. Parents of

good readers are more likely to provide educational materials, purchase children's books, and reinforce reading through praise than the parents of poor readers (Ellis, 1995). Given that some of the differences in parental reading practices may be related to the availability and possession of reading materials and supplies, as well as their own level of literacy, it is important to discuss the impact of socioeconomic status (SES) on parents' ability to be involved in their children's reading.

**Socioeconomic status.** Research, though scant, suggests that parents are able to become involved in the reading development of their children regardless of SES. Several studies indicating their participants and school settings were multiracial and in lower income areas of cities will be highlighted. Toomey (1989) interviewed 140 parents of elementary-aged students to determine the amount of contact they had with their child's school, their satisfaction with the home-school relationship, and the literacy development activities they used at home with their child. Parents were considered either "high" (frequent) contact or "low" contact in terms of their school involvement. Teachers also rated the level of parental involvement (high vs. low). Toomey found differences in reading performance between the two groups; children of high contact parents scored significantly higher on all measures of reading achievement. He found that high contact parents read to their children more frequently, were more likely to give praise during reading, and were more likely to provide a supportive environment for the child's reading development. In terms of the home-school relationship, the high contact parents reported more often than low contact parents that they received guidance and helpful information on how to assist their child in reading. There was no significant difference in terms of SES in high versus low contact parents. Although low contact parents were more likely



to be non-English speaking and slightly lower SES, a high proportion of the high contact parents were of lower SES. It should be noted that Toomey's (1989) study was conducted in Australia and, therefore, may not be representative of American families.

Mavrogenes (1990) proposed that economic-related time constraints, feeling intimidated by school staff and/or lacking confidence in their ability to handle their child's reading skill development at home impacted educational involvement by parents from culturally diverse or lower SES background. Obviously, more research is needed in the area of SES and parental reading practices, and the possible implications on parental involvement in home-based reading interventions.

In another study conducted abroad and involving parents of lower SES, the Parents, Children and Teachers (PACT) Project used multiple strategies to encourage parents in an inner city of London to help their children with reading at home. Griffiths and Hamilton (1984) reported gains in reading age and in the quality and enjoyment of their reading for children whose parents, over 90% of the study participants, consistently provided reading assistance. Some of the strategies and guidelines for parents participating in the PACT project were: listen to your child read several times per week, keep sessions short (10-15 minutes), provide praise as often as possible, discuss the book, and make the reading sessions enjoyable (Ollila & Mayfield, 1992). These strategies are frequently identified in the literature and are generally considered essential elements of a tutoring program for reading; they were all included in the intervention design of the present study.

In another London study, Tizard, Schofield and Hewison (1982) conducted research for two years in a disadvantaged working-class area, to examine whether there

was a causal relationship between active parental assistance and reading performance. Six schools were randomly assigned to three conditions: parent involvement, extra teacher help, and control. Two classes in each of the intervention schools were randomly assigned to either treatment or control group. Based on previously collected reading data, there were no significant differences in reading performance before intervention between classes receiving and those not receiving the interventions. In the parent involvement condition, books were sent home from school two to four times per week, and parents were simply instructed to read them to their child. No training was provided, beyond specific advice given on “good practice” during several home visits by the researcher each term.

Although the students were from inner-city neighborhoods, Tizard et al. (1982) reported positive gains in reading performance by children in both of the home collaboration schools; the differences between experimental and control groups at both schools were highly significant. Although the home reading sessions were not recorded or frequently monitored, and design considerations make it difficult to determine the conditions under which progress was made (i.e. specific home practices, teacher factors, advice given by researcher), the study suggests many practical implications that warrant further investigation. First, it was possible for the researchers to involve parents from inner-city, multi-racial schools, including non-English speaking and non-literate parents, in formal educational activities. Second, children whose parents were involved in the home intervention attained higher reading performance compared to control groups. Third, most parents in the intervention groups expressed satisfaction with their involvement. Fourth, teachers involved in the home collaboration expressed satisfaction

with the intervention and continued to involve parents in subsequent classes after the experiment ended. Finally, some children read to parents who did not read English, and a few parents who could not read at all. This did not appear to reduce parent's willingness to collaborate with the school and did not prevent improvement in the children's reading skills (Tizard et al., 1982). Certainly, additional research is needed among all student groups and SES levels in the area of parental involvement in children's education, particularly within the United States. However, the studies reviewed suggest that parents considered economically disadvantaged/lower SES and/or from inner city, multi-racial schools, were willing and able to be involved in their child's education and to implement home-based academic interventions.

Although Tizard et al. (1982) reported improvement in reading performance, other studies involving listening to children reading (or "hearing reading") have not found positive effects (Leach & Siddall, 1990; Toomey, 1993). Evans, Shaw and Bell (2007) found that across education and socioeconomic levels, and urban and rural sites, children's early literacy and language skills including letter identification, letter sound knowledge, phonological awareness, and receptive vocabulary were not enhanced by general reading at home. Having books and other reading materials available in the home does not necessarily mean that children will use them appropriately; a child who looks through a book alone may not learn as much about books, reading, and print as a child engaged in reading with an adult (Ollila & Mayfield, 1992). Research indicates that parents may not be using shared reading time to direct their child's attention to print, to discuss word meanings, to teach similarities in words, to elaborate on or question key concepts, or to identify reading strategies (Phillips, Norris & Anderson, 2008).

Children's literacy can be enhanced, however, by educating parents about effective strategies that could improve reading skills and literary experiences in the home environment.

### **Parent Reading-Tutoring Studies**

Several studies have indicated success with parents learning to tutor their children (Leach & Sidall, 1990; Tizard, Schofield, & Hewison, 1982; Topping & Whiteley, 1990), many reporting positive effects of parent tutoring on reading achievement in particular (Crawford, 1985; Leach & Siddall, 1990; Mehran & White, 1988), whereas others have not demonstrated positive effects (Coates & McLaughlin, 1992; Law & Kratochwill, 1993; Powell-Smith et al. 2000).

Two promising studies using parent tutoring to improve reading problems with children were identified in the Fishel and Ramirez (2005) review. Duvall et al. (1992) and Hook and DuPaul (1999) evaluated the effects of in-home parent tutoring with elementary school students using reading practice with error correction techniques. Research suggests that parent tutoring is a way to increase the amount of time children are engaged in a specific academic task, referred to as *opportunity to respond*. Increasing the opportunity for children to respond in home-based academic tasks is thought to enhance skill development and achievement, and provide support for success in the classroom setting (Duvall et al., 1992).

Duvall and colleagues (1992) targeted four students with reading difficulties, involving their parents as tutors during the summer. The purpose of the study was to determine the effects of tutoring on reading rates in the home setting, using students' basal readers, as well as to determine generalization effects on academic tasks at home

and at school. The tutoring intervention involved repeated reading with a systematic error correction procedure, praise, and feedback. In this reading strategy, the parent marked a starting point in the tutoring book, set a timer for 10 minutes, and the child began reading. When the child made an error (identified as any occurrence of word substitution, omission, or addition, or hesitation for longer than four seconds) the parent intervened in the following manner: 1) pointed to the error; 2) correctly stated the incorrect word; 3) directed the child to pronounce the word; and 4) asked the child to reread the entire sentence correctly. The parent offered praise when the child correctly read a sentence that had previously contained an error. After tutoring for four minutes, the parent marked the farthest point reached in the book, then directed the child to reread the passage from the beginning. This sequence of reading continued for 10 minutes, so that the passage was practiced two or three times per session. The parent then conducted a “check” by having the child read again from the starting point for one minute, but with no error correction provided. The child’s oral fluency scores during the Parent Check were posted on a daily scoring form (Duvall et al., 1992).

The Duvall et al. (1992) study used a multiple baseline and reversal design. All measures indicated improvement in reading rates and gains in standardized achievement test scores for all participants, as a result of the parent tutoring. Treatment integrity measures showed that parents accurately implemented the tutoring procedure (92% mean accuracy). Gains in reading performance were maintained over time and across settings for three of the four students. According to Duvall and colleagues, the fact that generalization occurred on probes taken from both tutored and untutored texts suggested

that the high level of repetition inherent in the tutoring procedure led to the development of more rapid and accurate oral reading skills.

In another parent tutoring intervention, Hook and DuPaul (1999) examined second and third graders with reading difficulties whom were also diagnosed with Attention Deficit Hyperactivity Disorder. A multiple baseline design across four participants was used to evaluate the effects of parent tutoring on oral reading rate. Tutored passages were taken from the same story read that week in class. The parent tutoring procedure was similar to the one used by Duvall et al. (1992). In addition, a sticker chart was used for reinforcement and a “cool down” period followed the readings. The tutoring intervention included repeated readings, systematic error correction, and rewards (daily sticker chart and a secondary reinforcer). The intervention was successful for all participants; an increase in words correct per minute was evident from the baseline period to tutoring at home, and effect sizes were considered to be large (2.21 to 7.61). The results were consistent with the findings of Duvall et al. (1992) in that oral reading rate improved for all students on the tutored passages at home. However, generalization to untutored passages at school was not strong. Hook and DuPaul (1999) indicated that the parents in their study agreed to implement the tutoring three to four times per week, but some had trouble actually completing the tutoring that frequently due to time and family constraints. Despite that reported difficulty, overall satisfaction ratings of the intervention by parents, students, and teachers were positive.

**Informal practices.** Some studies of parent tutoring in reading range from practices described as informal tutoring (Crawford, 1985) to those involving explicit instruction (Leach & Siddall, 1990; Mehran & White, 1988), and offer suggestions as to

how parents can help their children develop reading skills. Informal parent tutoring may involve listening to children read and tell stories, asking questions about what has been read, and reading signs, recipes, books, and magazines to children (Resh & Wilson, 1990). These informal reading activities are not specific in terms of content and how much time is spent engaged in the activity (Crawford, 1985). Thurston and Dasta (1990) cautioned that, without specific procedures, parents might feel frustrated or inadequate trying to help their children at home. There is a danger of tutoring sessions becoming unpleasant or punitive for the child (and perhaps the parent also). The more formal parent tutoring programs in reading involve opportunities for guided practice with feedback and direct instruction of specific skills, with parents being trained to implement the procedures (Duvall et al., 1992; Leach & Siddall, 1990).

**Formal practices.** Formal parent tutoring in reading with guided practice and feedback to children is characterized by explicit reading activities to be performed for specific lengths of time (Powell-Smith et al., 2000). Such programs tend to emphasize increasing reading opportunities and providing corrective feedback rather than teaching new skills, and generally require parent training (Thurston & Dasta, 1990). Some formal programs have included: (1) drill and practice using sight words, worksheets, and games (Goddard, 1988); (2) giving praise, prompts, and/or corrective feedback during reading (Thurston & Dasta, 1990; Wilks & Clarke, 1988); and (3) specific programs such as Paired Reading (Morgan, 1986). The Paired Reading method instructs parents to engage in simultaneous reading with their child initially, while providing error correction. At the child's nonverbal signal, the parent reading is phased out and the child then reads independently. The parent is available to join back in with simultaneous reading or to

provide support if needed. This model emphasizes praise for correct reading, self-correction of errors, and the child indicating when he or she is ready to read alone. A novel feature of Paired Reading is that the tutee selects the material to read, provided the readability level is within the competence of the tutor (Thurston & Dasta, 1990; Topping & Whiteley, 1990).

Other formal parent tutoring programs focus on introducing new reading skills and providing explicit instruction on certain skills, and may require parents to use Direct Instruction techniques (Powell-Smith et al., 2000; Rosenshine, 1976). In Direct Instruction, parents are given scripted lessons and particular books to use with their children. Training parents to implement these structured tutoring programs requires additional time and cost, according to the developers (Leach & Siddall, 1990).

**Structured program components.** Comparisons of various methods of parent tutoring in reading have indicated that a program should be structured to be most successful (Rasinski & Fredericks, 1989), but leave open the question of how much structure is necessary and reasonable. Several studies have suggested that tutoring programs focusing on guided practice and feedback can have positive effects on students' reading achievement (Duvall et al., 1992; Goddard, 1988; Thurston & Dasta, 1990; Topping & Whiteley, 1990; Wilks & Clarke, 1988). A study by Topping and Whiteley (1990) involving primarily parents as tutors (about 75%), but also using teachers, peers, and parent volunteers, found significant gains in reading accuracy and comprehension among children using the Paired Reading program, compared to a large control group. The gains in achievement, as measured by reading accuracy and comprehension, were still apparent at a 17-week follow up to the study.



Some studies have compared more explicit parent tutoring programs, such as those using Direct Instruction methods, and found significant impact on children's reading outcomes (Leach & Siddall, 1990; Mehran & White, 1988). Leach and Siddall (1990) compared four commonly used parent implemented reading interventions: listening to the child read, paired reading, pause/prompt/praise (PPP), and direct instruction. The techniques other than PPP have been previously described. In the PPP technique, parents are trained to give praise, wait to allow the child to self-correct errors, and then give prompts to help the child to self-correct effectively (Fiala & Sheridan, 2003). It was hypothesized that the most comprehensive instructional approach, Direct Instruction, would increase children's reading skills to a greater extent than either the PR or PPP methods. It was further hypothesized that all three of these methods would be more effective than the Hearing Reading condition, due to the additional instructional components provided in those approaches (Leach & Siddall, 1990).

In the Leach and Siddall study (1990), forty parents were randomly assigned to one of the four tutoring methods. Each group in the study had a 90-minute training session during which the procedure was explained and demonstrated, except for the listening to reading condition, in which parents were given only written guidelines and received no training. Parents in each condition were required to implement the particular intervention for ten to fifteen minutes a day during the school week for 10 weeks. The students continued to receive their normal reading instruction at school over the course of the intervention period. Reading accuracy and comprehension were assessed before and after the intervention using the *Neale Analysis of Reading Ability*. Statistical measures (one-way analysis of variance) showed that the student groups were not statistically

different in phonics skills prior to the start of the intervention. Data analysis of posttest scores showed significant differences in reading accuracy and comprehension for conditions. The Direct Instruction and Paired Reading conditions showed the greatest gains in reading performance on the outcome measure. The students in these conditions achieved rates of progress two to three times greater than the students in the Hearing Reading condition. According to Leach and Siddall, the difference in effectiveness may be attributed to the specific instructions and correction procedures employed with these two interventions. Support for the Pause, Prompt, Praise method was not as strong; although the group's mean was greater than in the Hearing Reading group, results did not reach statistical significance across students. It appeared the extra time and training required for parents to use more formal methods of reading to their children, such as direct instruction and paired reading, was worth it in terms of measurable reading gains. The Leach and Siddall (1990) study suggests that specific and structured procedures may be the best choice for parent tutoring.

Rasinski and Stevenson (2005) provided additional support for the use of a structured parent-tutoring program for reading intervention at home. They randomly assigned 30 beginning first-grade students to experimental or control conditions for an 11-week period. As the students represented a wide range of reading abilities, they were first placed into one of three reading development categories (Low, Middle, and High) based on pretest data, then randomly distributed between the two conditions. The parents of students in the Experimental group were trained in the *Fast Start* program. This program provided fluency instruction in the home setting using engaging reading materials and activities (i.e. nursery rhymes, poems, and children's songs). The parents

in this group were given 11 weekly packets of materials, and received weekly telephone calls from one of the examiners. Parents in the Control group did not receive any training, materials, or phone calls. The Control group received the normal school program including whatever form of parent involvement was expected for the child's classroom. Pretest and posttest data were collected using a criterion-referenced Letter/Word Identification test and a word-list assessment, both developed by the second author. To assess reading fluency, a curriculum-based measurement (CBM) was used, with reading probes taken from the curricular materials being used in the first-grade classroom.

The Rasinski and Stevenson (2005) study allowed for comparison of gender and skill differences among the groups and levels of students. Further assessment examined the association between tutoring time and reading improvement among the students in the Experimental group. Data suggested that the majority of parents tutored for about 10 minutes a day. Results indicated a significant difference between the lower half of the Experimental group and the lower half of the Control group. No other significant main effect or interaction was found. Although a main effect for treatment was not observed for the whole group, it was found that the parent/student dyads in the lower-achieving half of the sample that received the *Fast Start* materials, training and ongoing support showed significantly greater reading skill at posttest than the lower-achieving students in the control group. Thus, the *Fast Start* parent-tutoring program had a positive impact on the students with the lowest reading levels when the program began, those considered most at risk for reading failure (Rasinski & Stevenson, 2005).

Although several studies reviewed have indicated positive effects of parent tutoring programs on outcome measures of children's reading performance, some studies have not. In a study by Powell-Smith et al. (2000), 36 second-grade students were randomly assigned to two treatment groups and a control group. In the treatment groups, one used literature books for intervention and one used basal readers from the classroom. The 15-week study incorporated five weeks each of baseline, treatment, and follow-up. Parents were trained in small groups to implement a three-part intervention at home, involving a two-minute preview of the book, a 10-minute read aloud, and "choice activities" to complete with the child for eight minutes. Parents selected the books they wished to use from a list. During the treatment phase, the parents tutored four times a week, for 20 minutes each session. Although parents were taught error correction procedures, they were not required to correct all errors during reading. They were strongly encouraged to give praise for their child's reading effort. The reading sessions were not audio taped; however, a checklist, phone calls, and a home observation were used to monitor treatment integrity.

The results in the Powell-Smith et al. (2000) study found that neither parent tutoring intervention, using literature books or basal readers, had a significant effect on students' reading achievement. In interpreting their results, the authors noted questionable treatment integrity, too few subjects in each group to detect a statistically significant effect, and that the students were already making good progress in reading prior to the parent tutoring intervention. They also posited that a longer intervention period might produce greater effects on reading performance (Powell-Smith et al., 2000).

Coates and McLaughlin (1992) examined the effects of parent tutoring with a repeating first-grade student, on the number of words read correctly and the frequency of errors on pre and posttest measures from a variety of stories. The intervention, involving parent training on word recognition using flash cards, was implemented at home for 15-20 minutes per night for approximately five weeks. Using an ABA design, results showed that neither words read correctly nor the frequency of errors was changed by the intervention. Although slight gains were found in reading speed and accuracy between pre and posttest measures during and after the intervention, there was no significant difference between conditions. The improvement in speed may have resulted from practice at school, and not the home tutoring intervention. However, subjective measures of clinical significance indicated improvement. Both teachers and parents reported improvement in the subject's attitude toward school and reading, his attitude toward family, and social interactions with peers (Coates & McLaughlin, 1992).

A third study reviewed also did not suggest positive effects of parent tutoring on reading performance. Law and Kratochwill (1993) examined the effectiveness of a tutoring intervention on 13 students having reading difficulties. The Paired Reading procedure provided children with a model and focused on the use of positive reinforcement. Parents were trained in small groups to implement the procedure, involving both simultaneous and independent reading at home for 10 minutes a night, for a period of five weeks. All home sessions were audiotaped; graded reading passages were used to evaluate reading fluency and accuracy rates throughout the baseline and intervention periods. Using a series of multiple baseline designs across groups, results showed that although parents implemented the Paired Reading procedure with high

accuracy (mean implementation of 86%), significant improvement in subjects' reading skills was not found. Subjective measures indicated positive perceptions of the intervention program, with parents reporting the greatest changes in their child's self-confidence and attitude toward reading (Law & Kratochwill, 1993).

In evaluating a parent tutoring intervention involving 76 first-grade students with low reading ability, Mehran and White (1988) found mixed results in terms of treatment integrity and reading improvement over time. Pairs of high and low readers were randomly assigned to experimental and control groups. A tutoring program was adapted for parents that involved teaching letters/sounds, sight words, decoding, and suggestions for reading activities. Parents tutored their child at home for 15 minutes, three times per week, for most of the school year. Outcome measures were performance on reading subscales from the Woodcock-Johnson assessment battery and the Comprehensive Test of Basic Skills (CTBS). Parents submitted tutoring logs every two weeks; treatment integrity was considered to be low. Results indicated an initial improvement in reading scores for students in the experimental group, but this advantage was not maintained over time. When analyses of results were limited to families demonstrating more consistent implementation of the intervention (a higher degree of treatment integrity), the effects of the tutoring program were more substantial (Mehran & White, 1988).

In summary, studies of parent tutoring in reading provided evidence that parents can implement home-based procedures to help students improve reading skills on outcome measures, given specific structure and support. Studies ranged from informal techniques, such as listening to children read and asking questions, to formal programs involving corrective feedback and direct instruction of specific skills. Leach and Siddall

(1990) compared four common parent-reading interventions and found that those including paired reading and direct instruction showed the greatest gains in reading outcomes. The authors attributed the effectiveness of these interventions to the specific instruction and correction procedures used. Rasinski and Stevenson (2005) found that a structured parent tutoring program, including training and monitoring of parent implementation strategies, had positive results for students having the lowest reading levels at the start of the study. Overall, the studies suggested that specific and structured procedures for parents to implement may be the best choice for home-based tutoring interventions. These procedures, however, require more intensive parent training.

Although most parents want to encourage the academic growth of their children, they may not be sure of the best way to do so. Parents may need guidance from schools and educators regarding the best approaches to use at home to help improve their child's reading skills. A study by Weinberger (1996) found that only about 25% of the parents she surveyed felt they knew how reading was being taught in their child's school. Schools and teachers are in a prime position to inform parents of effective reading strategies and ways to provide assistance to their children, while linking recommendations for parent involvement to the current reading instruction provided in the classroom.

### **Evidence-Based Parental Instructional Strategies in Reading**

Given the inherent opportunities for supportive parent-child interactions and modeling of literacy behaviors, structured home-based tutoring is one parent involvement strategy with good potential to improve skill development and student achievement (Powell-Smith et al., 2000). Parent tutoring provides one-to-one assistance and increased

opportunities to practice important academic skills. However, it is critical that the parents are supported to use evidence-based strategies in their tutoring.

A study by Resetar (2003) examined the effectiveness of a parent tutoring intervention in reading for five first-grade children performing below grade level. The components of the tutoring program were modeling of procedures, using reading activities related to phonics, fluency and comprehension, oral reading fluency (ORF) measures, and reinforcement with a prize box. The parents were trained to implement the procedures during individual training sessions. The parent tutoring was to occur every school day for 15 to 20 minutes, for a period of three weeks, and included two ORF probes that parents administered before and after the reading activities. The ORF probes were adapted from the students' first-grade reading program. Treatment integrity was measured via a progress-monitoring log for each session, and was determined to be sufficient (range 82% to 100%). However, a random review of audiotapes revealed, for some parents, occurrences of incorrect or skipped program components that were not reflected by the intervention logs. A revised form of the Intervention Rating Profile developed by Witt and Martens (1983) was used to measure parent acceptability of the intervention. The measure was adapted for parents and reading concerns rather than for teachers and school-based behavior. Results showed significant gains in words read correctly per minute on tutored passages for four of the five children; however, generalization to untutored passages at home, school, and follow-up was not found.

In addition to the Resetar (2003) study, Delquadri's (1978) findings on tutoring interventions also suggested that a short intervention period can have an effect. In his studies, students with reading disabilities were tutored by parents for 10 minutes outside



of the classroom, using an error correction procedure. Teachers recorded three-minute samples of the students' oral reading from basal texts in class. Within two days of initiating the intervention, immediate and significant gains were found in reading rate during tutoring. Additionally, the increased reading rates during tutoring generalized to reading sessions in the classroom the next day. During reversal phases of the intervention design, the reading rates obtained in class declined. This research also showed a decrease in errors on classroom reading tasks, specific to the tutored words in the modeling and error correction procedure used during intervention (Delquadri, 1978).

In a study by Gortmaker, Daly, McCurdy, Persampieri, and Hergenrader (2007), parents were trained to use empirically-derived reading interventions with third-grade students identified with learning disabilities. Brief experimental analysis was used to determine the most effective reading fluency intervention for each child. The evidence-based fluency interventions included listening passage preview, repeated readings, phase drill with error correction, and syllable segmentation error correction. Some treatment conditions included reward plus instruction. Instructional passages were taken from the students' basal reading series; words read correctly per minute and errors per minute served as the dependent variables.

Parents were trained to carry out the procedures in their homes. During training, the parent implemented the procedure with the child while the examiner observed and gave immediate feedback. The parents were required to perform the intervention with 100% accuracy in the presence of the researcher before the training session ended.

Parents were instructed to conduct the tutoring at home for three to five days per week for 10 to 15 minutes per session, for a period of four weeks. Parent and child satisfaction

ratings were obtained using the Behavior Intervention Rating System (Gortmaker et al., 2007.); both viewed the interventions as acceptable and effective. Results found that all three children increased in reading fluency as a function of the parent tutoring. Other similar studies (Burns & Wagner, 2008; Daly, Persampieri, McCurdy, & Gortmaker, 2005; Persampieri, Gortmaker, Daly, Sheridan, & McCurdy, 2006) found that students increased their reading fluency scores and maintained these increases over time, however, all required individualized reading interventions to be developed that were not aligned with any school-based interventions already in place for the target students.

**Involving parents in a reading intervention.** Parent involvement in a child's learning is most effective when it's viewed as a partnership between parents and educators, connects the school and home settings in systematic ways, and reinforces classroom activities (United States Department of Education, 2007). Stegelin (2002) proposed several ways for teachers to involve parents in their child's literacy development, and three of them were incorporated into the current study: 1) developing an effective home-school component that focuses on literacy; 2) allowing parents to check out or borrow books and reading materials for use at home; and 3) extending stories read in the classroom into the home setting.

In reviewing the studies on parent involvement, the strongest evidence for improved student outcomes was found for programs that implemented parent tutoring at home and targeted a single academic problem, like reading. The methodological strengths of such studies included an adequate description of the procedures used by parents at home and documentation of the program components. Researchers have found multiple components that may be included in a successful home-based reading-tutoring

program. Neidermeyer (1970) offered the following as necessary components of parent-tutoring programs: specific objectives communicated clearly to parents; structured teaching materials; role-playing of the procedures during a parent training, with immediate feedback given; instruction to parents in the use of positive reinforcement; and a method for helping parents to monitor their child's performance. Fredericks and Rasinski (1990) posited four additional criteria for successful parent tutoring programs, specifically related to reading. Effective home programs should involve: (a) reading from books; (b) enjoyable and easy to implement activities; (c) a connection between home and school; and (d) consistency and commitment over a long period of time, rather than short-term activities. The studies reviewed here ranged from three weeks (Resetar, 2003) to two years (Tizard et al., 1982) of home tutoring intervention.

The current study used a structured approach to combine many of these evidenced-based components and strategies, in particular, scripted procedures, instructions, materials, and books provided from school, explicit reading activities and strategies, repeated readings with praise and corrective feedback during reading, parent training with modeling and observation of components, ongoing performance monitoring, reinforcement and motivational strategies. One important area highlighted in the literature was to link the home and school intervention and extend stories read in the classroom into the home setting. However, no studies were found that provided a direct, systematic, structured, modeled, and monitored extension of a school-based reading intervention into the home. The present study provided such a home-based program using evidence-based reading strategies that were directly linked to the classroom reading materials.

**Time spent in reading.** As previously discussed, the underlying reasons for encouraging daily reading involve promoting family literacy, increasing time spent reading, and improving overall reading skills, with the ultimate goal to further the child's academic achievements and later success in life. In addition to the social and emotional benefits to families, encouraging parents to read with their children can meet an important instructional need (DeBruin-Parecki, 1999).

A major difference between good readers and poor readers is the amount of time they spend engaged in reading (Armbruster et al., 2001). Numerous studies have shown that early readers come from homes where adults read to them regularly, and where books and reading materials are readily available (Baker et al., 1999; Bus, van IJzendoorn, & Pelligrini, 1995; Morrow, 1983; Teale, 1978). Children who enjoy books and reading are more likely to read more often and become better readers, and continue to improve their skills (DeBruin-Parecki, 1999). Studies have found a strong relationship between a student's reading ability and how much time he or she spends reading (Armbruster, et al., 2001). In general, poor readers do not enjoy reading, do not readily engage in reading tasks, and spend less time reading, which further perpetuates the cycle of poor reading skills (Topping & Lindsay, 1992). Poor readers may avoid reading completely, perceiving it to be frustrating, stressful, and taking too much effort (Meyer & Felton, 1999). Reading interventions that provide opportunities for skill development and extra practice can possibly change the outcome of poor reading achievement for struggling readers (Rasinski & Stevenson, 2005).

Over a decade ago, the Learning First Alliance (1998) advised educators and parents that children should be spending more time on reading than is available at school,

and should read at home on a regular basis, for 20 to 30 minutes per evening. The books they read should be of interest to them, and match their level of reading proficiency so as not to be too easy or too difficult. Parents should be involved in and support their child's reading, and can do a great deal to build their literacy development. Teachers can provide parents with specific strategies to use the time spent reading at home more effectively (Learning First Alliance, 1998).

**Interactive reading behaviors.** Morrow (1990) identified nine interactive reading behaviors that had been investigated by researchers, and could perhaps be taught to parents. These included offering praise and positive reinforcement, clarifying information, giving or extending information, restating information, questioning, scaffolding dialogue and responses, direction discussion, relating concepts to life experiences, and sharing personal reactions. Additionally, promoting positive attitudes toward reading through modeling appropriate reading behaviors, using an animated voice and facial expressions, and showing enthusiasm when reading, were important for the adult to convey to the child (Morrow, 1990). Parents can stress the importance of reading, set clear expectations for their child's reading, and reinforce progress toward reading goals (Ollila & Mayfield, 1992). Through scaffolding, parents can help their child understand the meaning of reading passages through discussion and engage in metacognitive questioning strategies before, during, and after reading (Ollila & Mayfield, 1992). Teale (1981) applied Vygotsky's (1978) theories of the zone of proximal development and scaffolding to predict that children may eventually internalize parent-supported strategies and behaviors during joint-reading opportunities, which can then lead to self-regulated reading behaviors and independent functioning.

By providing assistance and scaffolding, adults can help children to construct knowledge and meaning from what they read. Children also need to receive positive reinforcement for and feel successful in their efforts. The combination of these elements is hoped to promote interest and motivation for the process of reading while also encouraging the use of strategies and word study skills during independent reading (DeBruin-Parecki, 1999; Stegelin, 2002). Many opportunities for reading exist outside of the classroom; children's attention, involvement, and level of engagement in such reading opportunities may determine if positive outcomes result.

The current study will combine one-to-one parent training in implementing a home reading-tutoring program with explicit materials and instruction, and research-based strategies for repeated reading, error correction, and actively thinking about the words being read. With the daily reading intervention, students will have at least four opportunities to hear and practice fluent reading, with corrective feedback, monitoring and support, and reinforcement and praise consistently provided. The materials used at home, including books at the child's independent reading level (95% or above accuracy rate), are directly linked to the reading materials and instruction from the classroom reading intervention at school. Previous studies have used empirically supported reading strategies and oral reading probes developed from grade-level books, but have not used the materials and strategies already being used in a school-based structured reading intervention.

## **Chapter III**

### **Method**

This chapter describes how the study was conducted, including how the students and their parents were selected for participation, and a description of the participants and the setting. A parent home-based tutoring intervention (PH-BTI) was developed to extend a school-based reading intervention the students were already involved in. All the components of the program, including the instruments and materials, procedures for implementation, data collection methods, and training sessions for parents will be described.

### **Participants**

The participants were four children, two boys and two girls, attending second grade in a small elementary school in a suburban Maryland school system; their parents also served as participants in the study. The students were selected for the study based on their participation in a reading intervention program at school, called Leveled Literacy Intervention [LLI] (Fountas & Pinnell, 2009). Based on materials and program methodology, only four students could participate in the LLI intervention in one pull-out reading group (outside of the general classroom setting). The four lowest readers in second grade not currently receiving special education services were selected. The students were all in the same classroom for their primary reading instruction, and so had the same second-grade classroom teacher.

The ethnicities of the study participants included one Hispanic and three Caucasian students. In the 2009-2010 academic year, the elementary school in which the

study was conducted had an enrollment of approximately 450 students, representing the following ethnicities: 70% Caucasian, 14% Asian, 6% African American, 2% Hispanic, 0% Native American, and 8% Unreported. The two male students (Kevin and Chad) were seven years old; the two female students (Breanna and Molly) were eight years old.

**Description of students and parents.** Kevin is a Hispanic student, who was adopted from Guatemala by Caucasian parents when he was 26-months-old. At that time, he understood Spanish and spoke a few words in Spanish. Currently, he speaks only English. During the course of the study, Kevin was diagnosed with ADHD and began taking stimulant medication. He was referred to the school's IEP team and began receiving special education support services in addition to the LLI intervention with the reading specialist.

Chad, Molly, and Breanna are Caucasian. All four students have siblings living at home. Molly and Kevin each have a brother; Chad and Breanna both have several siblings. Chad's parents are divorced and have both remarried. Since Chad and his older biological brother spend equal time between the two families, both biological parents participated in the study. Between his two households, Chad has five older stepbrothers. Except for Breanna's parents, all attended college. Two of the parents are homemakers; three are employed outside of the home.

**Reading levels of the students.** Through systematic assessment at the beginning of the school year, the classroom teacher determined each student's instructional reading level, and then formed small reading groups with children who were performing at about the same level. Based on the benchmark level system used by the host school district (see Appendix B), students should be reading books at a Level J at the beginning of



second grade and should pass Level M by end of the school year/June. During second grade, all students are assessed by their classroom teacher about once a month to determine their progress in reading. Students are considered to “pass” a reading benchmark when they can read the book at an independent level, which corresponds to 95-100% accuracy in word recognition. At this level of mastery, a student should be able to read and understand most words in the book, and require very little adult assistance or support. Students must also demonstrate “reasonable fluency” to pass a benchmark level, as well as 100% comprehension of the material, based on their retelling of the story and their ability to answer several questions following the reading selection. In the benchmarking system, an *instructional* reading level corresponds to 90-94% accuracy in word recognition; a *frustration* level is below 90% accuracy. The *instructional* reading level determines which books the teacher uses for reading instruction in the classroom, and represents the level at which the child is appropriately challenged by reading material that is neither too easy nor too difficult, but may require some teacher support during reading.

At the time this study began in May, three of the four student participants (all except for Chad) were reading on an instructional level L, which is approximately a middle-second grade level and where students should be performing in January/February. Their second-grade teacher had recently administered reading records, and Molly, Kevin, and Breanna had all passed the K level exit book with adequate fluency and comprehension. They were considered to be independent in the K level book, and instructional in the L level book. Based on the reading benchmarks, Molly, Kevin, and Breanna were approximately four months behind the grade-level expectations in reading.

Chad was performing higher, just slightly below grade level, reading at an instructional Level M. He had been given an L level exit book prior to the beginning of the study, and passed with adequate fluency and comprehension. At the time the home tutoring intervention was implemented, the second-grade students should have been reading independently on a Level M to be considered *on grade level*. Therefore, all four students were slightly below grade level in reading, with Chad performing closer to grade level expectations than the other three participants.

### **Setting**

Data collection for progress monitoring and generalization to untutored books occurred at school. All parent training sessions occurred at school. The tutoring intervention, and related data collection in the tutored books, occurred at home.

### **Instruments**

Several instruments were used in this study to measure students' oral reading fluency, in terms of pace/rate, accuracy, and prosody. The two techniques for data collection were curriculum-based measurement of fluency rate and accuracy, and a fluency rating scale for prosody.

**Curriculum-based measurement.** Unlike standardized tests, curriculum-based measurement (CBM) can be used to obtain frequent measures of reading performance. Deno et al. (1982) found that listening to students read for one minute from their reading book provided a valid measure of their reading skill. The CBM technique involves using reading passages from books, such as those used in daily instruction, approximately at the student's current reading ability. After the student reads the passage aloud, the reading rate is determined by subtracting any errors from the total number of words read within

one minute. The resulting score reflects oral reading rate, specifically *words read correctly per minute* (NetNews, 2004; see Appendix G). Second graders considered *on grade level* in reading fluency skills are able to read instructional level text with approximately 80 to 100 words correct per minute, using appropriate phrasing and expression. Hasbrouck and Tindal (2005) determined the average weekly improvement in reading fluency for a typical second grader to be 1.2 words read correctly per minute.

**Fluency probes.** Oral reading fluency (ORF) probes were used to determine reading expression/prosody and words read correctly per minute (WCPM) in all reading materials used. For reading probes at school, passages of approximately 100 words were selected from LLI and second-grade books. Fluency probes at home were taken as students read the entire book during tutoring.

For all reading probes in this study, students read from the actual books, rather than printed copies of text. I used typed passages of the reading probes in order to follow along with each student's oral reading and mark any errors. These served as the reading records throughout the study.

**Oral reading rate.** Oral reading rate, expressed in WCPM, was used to measure the student's reading fluency in each book, and served as the dependent variable. Reading rate accounted for both speed and accuracy, and was selected because it is an important component of fluency and serves as a strong indicator of overall reading competence (Fuchs, Fuchs, Hosp, & Jenkins, 2001).

As previously described, on the county benchmark assessment an accuracy rate of 95% to 100%, adequate fluency ratings, and 100% of literal and inferential comprehension questions answered correctly are all required before a student "passes"

that reading benchmark level. Although a specific *number* of words read correctly per minute (WCPM) is not required for passing a benchmark, the expectation at the target elementary school for an average second-grade student is to read 90 to 100 WCPM in grade-level material by the spring of that school year.

***Fluency rating scale.*** Fluency ratings also served as a dependent variable to measure the prosody, or expression, of the student's oral reading. A fluency rating scale was used to assess reading fluency for each passage read (see Appendix C). The scale was primarily adapted from the reading benchmarking system used in the target school district, in which a student must read with "reasonable fluency" in the areas of phrasing, pace and smoothness, to pass the benchmark assessment at an independent level. The school district reading department adapted the three oral reading categories from the work of Zutell and Rasinski (1991). A child's reading is rated on a 4-point rubric based on many descriptive criteria, with ratings of 3 or 4 on all scales indicating reasonable fluency.

I considered using the fluency rating scale from the LLI (Fountas & Pinnell, 2009) program, but it was not considered ideal as a summary of all the elements of prosody. The measure included just one overall category of fluency, rated on a scale of 0 to 3, with a long description of the expected components at each level. However, "expressive interpretation" (Fountas & Pinnell, 2009) was one descriptor that was not included on the district's benchmarking fluency scale, so I included it with "phrasing" on the fluency scale used in this study.

The three subscales comprising the adapted fluency measure for this study were phrasing/expression, pace, and smoothness (see Appendix C). One to four points were

awarded in each area, based on the descriptive criteria given, for a total of 12 possible points. The subscale points were summed into an overall fluency rating score for each passage, to reflect the prosody of each student's reading. Using 12 points allowed for a broader range of skills and a greater distinction between levels, and could show small improvements or specific areas of concern more clearly than a 4-point scale. These rating scales and the oral reading probes were the two primary data collection instruments used in this study. A tape recorder and audiotapes were also used to score each home tutoring session for WCPM and fluency ratings.

**Intervention component checklist.** Thirteen components considered essential for program implementation comprised this checklist (see Appendix D) developed to measure treatment integrity. The presence or absence of each component was documented by circling "Y" or "N" on the checklist. I completed a checklist for each tutoring session, as well as the parent training sessions, and a percentage of components implemented correctly was determined. In this manner, I was able to assess if the parent implemented all necessary components of the tutoring program for every session.

**Acceptability ratings.** An acceptability measure was used to determine parents' perceptions of the home tutoring program, including ease of implementation and effectiveness in addressing reading difficulties. Pre and post-intervention data were collected from parents using a revised form of the Intervention Rating Profile (IRP) developed by Witt and Martens (1983). Similar to the one used in Resetar's study (2003), I adapted the scale to determine parents' perceptions and attitudes regarding their child's reading problem and the acceptability of the proposed home-based intervention (see Appendices L and M). The questions were answered based on a 5-point, Likert-type

scale, ranging from Strongly Agree to Strongly Disagree. To examine patterns of responses, overall means were determined both by parent and by question. Qualitative data in the form of short-answer questions were collected from parents on the post-survey. Students, parents, and teachers also participated in an exit interview with me to further explore treatment acceptability.

### **Reading Intervention: Leveled Literacy Intervention (LLI)**

As indicated, the four student participants were already receiving the LLI reading intervention at school. The parent home-tutoring program in the current study was developed as an extension of this reading intervention, with particular components chosen that parents could use daily at home.

LLI is a short-term, supplemental literacy program designed to provide intensive support to primary-grade students who are struggling with learning to read and write. It consists of a series of planned lessons incorporating a variety of instructional approaches, delivered by a trained teacher for 30 minutes daily in a small group (Fountas & Pinnell, 2009). In the target elementary school, groups of three or four students participated in the LLI lessons with the reading specialist Monday through Thursday, during a typical week. Each day, the students independently re-read two books from previous lessons and then received instruction on a new book. The goal was to provide one book at students' independent reading level and one book at their instructional level each day.

During the school year the study was completed, the LLI program was implemented by all reading specialists in the school district and focused on second-grade students performing below grade level expectations. Although encouraged to use parts of the program with kindergarten and/or first grade students, the reading specialist was to

implement all LLI elements as designed with second-grade students receiving her reading intervention. Thus, there was greater assurance that the students in this study were receiving the same instruction during their school-based intervention. The LLI lessons were not differentiated for individual students, in that the same lessons and program materials were used with all students in the reading group.

The LLI lessons include the following 12 design features that are based on empirical research on reading and vocabulary acquisition, language learning, and student motivation (Fountas & Pinnell, 2009), and are summarized below:

- Books are matched to the child's reading ability, providing daily opportunities for success. Children read every day at their instructional level with teacher support, as well as at their independent level with little or no support.
- Lessons provide systematic instruction in phonemic awareness and phonics, through explicit instruction in letters, sounds, and their relationship, and targeted letter-sound relationships and spelling patterns.
- Daily opportunities promote increased fluency through oral reading of practiced texts, with teacher support given. The teacher demonstrates and/or prompts for fluency, phrasing, and rapid word solving as the child reads.
- Books are sequenced to allow students to apply what they know from previous texts to the new text, in terms of building a reading vocabulary of high-frequency words and words that need to be decoded.
- Teachers demonstrate effective strategies for comprehension during the introduction of new books and discussions after reading. Children are expected to use strategies as they read, talk, and write about the reading selections.

- Lessons are designed to expand vocabulary and develop oral language, through teacher-modeled discussions and conversations with peers about the books.
- LLI facilitates a home-school connection around literacy learning. A take-home version of every book read in class is available for use at home. Students may be given a specific word study or writing activity to complete at home also.

**Program evaluation.** In a recent outcome study, Ransford-Kaldon et al. (2010) evaluated the efficacy of the LLI program in terms of reading achievement gains for students in grades K to 2, fidelity of program implementation, and perceptions by teachers and school staff. The study involved two school districts in the United States; students in nine schools were matched demographically and randomly assigned to treatment or control groups. The LLI program was implemented for one semester; comparisons of student achievement in literacy were conducted pre and post intervention. Independent observations and self-report data from teachers were used to assess treatment fidelity. Results indicated that students in kindergarten, first, and second grades receiving the LLI intervention attained higher reading benchmark levels than students in the control groups. Observations indicated a high level of program implementation in both school districts, and teachers reported that the program had a positive impact on their reading instruction. The lesson components with the lowest degree of implementation fidelity were related to home and classroom connections. Similarly, LLI teachers were least likely to agree that the children in the LLI intervention and their parents participated in literacy activities at home.



### **Parent Home-Based Tutoring Intervention**

In consultation with the reading specialist, the LLI program components were reviewed and examined for linkages to home literacy development. Prior to the tutoring intervention, the expectation for LLI home involvement was for parents to look through the work binder for any work that could be supported at home and to read the books sent home during the week. Although many leveled books and related phonics, word study, and writing activities were sent home by the reading specialist daily, many of the “homework” tasks came back incomplete. There was also no method for determining if the take-home books were actually read with the student, and no specific procedure or script to explain to parents how to use the materials or how they were connected to reading skill development.

A home tutoring program for parents to implement daily was developed as an extension of the reading intervention their child was receiving at school. The parent component was designed collaboratively with the reading specialist to add a systematic, structured home intervention to the systematic, structured intervention program being used at school. In designing the home reading intervention to accompany the school-based LLI lessons, elements identified by previous researchers as essential to effective parental involvement programs were adapted. These included: (a) clear objectives, (b) structured procedures that were easy to implement, (c) easy to use materials, (d) face-to-face training with modeling by an instructor, role playing of the procedures, and immediate feedback provided to the parent, (e) provisions for positive reinforcement, (f) consistency, and (g) a connection between home and school (Fredericks & Rasinski, 1990; Gortmaker et al., 2007; Neidermeyer, 1970; Rasinski & Stevenson, 2005; Thurston

& Dasta, 1990). The goal was to use materials already available through the LLI lessons (e.g. take home books) that were at an appropriate reading level (e.g. Independent level), and provided scripted directions and activities, individual parent training to implement the procedures as intended, and weekly check-ins for continued monitoring and support of implementation.

**Implementation.** The tutoring procedure was implemented at home, typically five nights during the school week, for 15 sessions and/or approximately three weeks. During a three-week parent reading intervention, Resetar (2003) found significant gains in words correct per minute on tutored reading passages for four out of five students. In the current study, if a tutoring session were missed for some reason, parents were encouraged to make it up over the weekend. Parents taped all tutoring sessions. The sessions were intended to be approximately 15 to 20 minutes in length (as recommended by Wedel & Fowler, 1984). However, toward the end of the intervention period, the tutoring sessions sometimes lasted 30 minutes, especially for the students who began intervention later due to the program design.

**Skills selected for training.** In order to keep the expectations reasonable and manageable for the parents, and able to be implemented on a daily basis within a 15-20 minute time period, only two areas of the LLI program (Fountas & Pinnell, 2009) were selected for the home-based intervention:

- Opportunities to increase fluency through repeated oral reading of familiar text, with support given as needed.
- Strategies for rapid word solving (e.g. involves speed, accuracy and flexibility in solving words), which included a metacognitive strategy in the form of a

bookmark prompt (see Appendix J) that children were encouraged to use while reading.

The reading specialist and I collaboratively determined the focus areas and strategies to use for the parent tutoring intervention; the second-grade classroom teacher was not involved in developing the home-based intervention.

***Repeated reading.*** The primary component of the parent intervention was the increased opportunity to read at home using appropriate, independent level text. The repeated reading strategy used in the current parent intervention combined elements described by other authors during the review of literature and determined to be effective in increasing reading fluency. Repeated reading with error correction was the primary strategy used in the tutoring intervention and grounded in research on fluency development (Armbruster et al., 2001; Rasinski, 1990).

The parent began by reading the passage to the child first (Chard et al., 2002; Morrow, 1990; NICHD, 2000). In this way, the child heard oral reading modeled and perhaps felt more comfortable about the reading activity by sitting and listening first. Then the parent and child read together once, similar to the *paired reading* strategy (Morgan, 1986; Topping & Whiteley, 1990), keeping pace with one another. Following this second reading, the parent asked if the child felt comfortable with the material and was ready to read alone. If the child indicated that more practice was desired, then the paired reading would be repeated. If ready to read alone, the child then read the book independently at least twice (Armbruster et al., 2001). The parent continued to provide support when needed during each reading, to prevent frustration. The complete strategy is outlined in Appendix I.

The repeated reading intervention in this study also included elements of the pause/praise/prompt strategy (Fiala & Sheridan, 2003). Parents waited to allow the child to self-correct any misread words or errors. Errors consisted of any words read incorrectly, omitted, guessed at by making a substitution, or not read within three seconds (Coates & McLaughlin, 1992). Self-corrections, repetitions, and pauses were noted, but not scored as errors. Following any errors or hesitations longer than three seconds, the parent gave prompts to help the child to self-correct effectively. In the current study, prompts were both verbal (i.e. “Look at that word again”) and visual reminders (i.e. the reading bookmark).

One difference from traditional repeated reading strategies (Therrien, 2004) was that CBM data needed to be collected for one minute during an unassisted read, to measure oral reading fluency in the same condition in which the intervention was occurring - the home environment (Duvall et al., 1992; Hook & DuPaul, 1999). During the child’s first independent read of the book (the third overall reading), the parent did not provide error correction or reading support. However, if the child became stuck on a word, the parent supplied the word and encouraged the child to keep reading (Duvall et al., 1992). The parent provided error correction and support on all subsequent readings during the tutoring session.

***Metacognitive strategy.*** Denton and Hasbrouck (2000) noted that when listening to a child read, parents can provide support by helping the child know what to do when he/she gets to a “hard part” or gets stuck on an unknown word. They can remind the child to use decoding strategies and/or to think about what word would make sense in the sentence. During the LLI lessons, the reading specialist modeled and reinforced

strategies to take words apart and understand their meaning, including chunking syllables and recognizing patterns in words. She and the students also used a bookmark each time they read, which listed three questions readers should ask themselves when encountering an unfamiliar word or making a guess: *(a) does the word make sense? (b) does it sound right? (c) does it look right?*

In the current study, parents used a laminated bookmark (see Appendix J) to refer to when reading, to serve as a visual reminder to the students to think about what was being read and if it made sense to them. The bookmark contained the three key questions that “good readers” should ask themselves as they encounter an unknown or unfamiliar word when reading. This strategy was used to promote active thinking (metacognition) about what was being read and also to promote rapid word solving (Fountas & Pinnell, 2009). It could also support comprehension and application of phonics skills and decoding strategies, although these were not a focus in the current study.

## **Materials**

**Tutoring program materials.** All of the materials needed to implement the tutoring program at home were given to parents at a training session. The materials were kept in a large black three-ring binder, with the exception of a tape recorder, cassette tapes, and a prize box.

**Binder.** A large three-ring binder was used to hold all the tutoring materials. The binder was the same one used for the LLI school intervention, so students were already in the habit of carrying it to and from school daily.

**Books.** Reading books from school were used for the home tutoring, as well as for progress monitoring and generalization to untutored material, and for follow-up

measurement. Second-grade books were used for selection criteria, generalization to untutored text, and follow up (see Table 1). The LLI classroom materials included a variety of books that were both at the students' instructional level and also at their independent reading level. Only LLI books at the child's independent reading level were used at home for tutoring. Each book was placed in the front pocket of the binder.

**Bookmark.** The front pocket of the binder also included the laminated bookmark that listed three questions parents and students can ask themselves if they come across an unknown or unfamiliar word when reading: *Does the word make sense? Does it sound right? Does it look right?* (see Appendix J).

**Tutoring log.** A tutoring log (see Appendix E) was used for each session to document the date, the time the session started and ended, the name of the book read, the total number of repeated readings completed for that story, and whether the bookmark was used to prompt the child during reading. The reinforcer selected for that session was also noted. Enough log sheets for 15 to 20 tutoring sessions were included in the binder.

**Tape recorder and cassette tapes.** A tape recorder was given to parents at the training session, with enough tapes to record 15 to 20 sessions. The tapes were identified by student code, week, and data collection period (baseline or intervention), with a label on both the tape and the cover. The daily tapes to and from home were kept in a zippered section of the binder.

**Reinforcers.** An assortment of items to use as positive reinforcement were selected by parents at the training session, and placed in a small prize box to keep at home. Coupons for certain activities, such as time to play a game, use the computer, or

watch television, were also included in the prize box. A *tutoring star chart* with stickers was also used to motivate the participants (see Appendix F).

## **Procedures**

As previously indicated, four students and their parents were invited to participate in the home tutoring study. A participant request letter was sent home (see Appendix A), explaining the purpose of the study. All parents who were contacted returned the form expressing interest in participating in the tutoring intervention. I then called each parent to schedule a training session at a convenient time. Only one parent was required to participate and engage in tutoring with the child at home; however, there was one circumstance in which both parents were trained to implement the program. Since Chad's parents were divorced and he spent equal time living with both of them, his mother and father were trained separately and agreed to share the tutoring responsibility. Following the training session, parents were asked to grant formal consent for participation. All four mothers and one father participated in the study.

**Parent training.** Parent training sessions occurred at school, were conducted by me and my graduate student intern, and followed a series of steps, outlined below:

1. The purpose of the tutoring program was explained, in terms of both reading fluency skill development and parent implementation of an intervention. I discussed the importance of implementing the procedures exactly as designed and following a consistent routine when conducting the tutoring sessions at home. Adhering to the daily schedule for tutoring was set as an expectation for all participants at the start of the study. Parents were encouraged to use a relatively quiet area of the home that would be free from distractions, if possible.

2. The contents of the tutoring binder were reviewed in detail. In addition to the materials already discussed, the binder included step-by-step instructions for both the tutoring session (see Appendix H) and the repeated reading strategy (see Appendix I).

3. The instructions for all materials and forms used in the tutoring program were read over and discussed with the parent, and any questions were answered during the training session.

4. After reviewing the contents of the binder, I modeled each component of the program for the parent, with my trained intern serving as the child participant. Using an LLI book, I modeled the repeated reading strategy, frequently praising the “student” for her effort when reading.

5. The intern had been instructed to make several reading errors during the practice session. I modeled using the reading bookmark to think about what was just read and correct errors.

6. I offered the student a reward from the prize box, and put a sticker on the star chart under the appropriate day.

7. I completed the tutoring log to document the activities and steps during the practice session. After the session was completed, I turned off the tape recorder and put all the materials back in the binder.

8. The parent then practiced all tutoring procedures with the trained intern. Immediate feedback and support were provided; any missed elements were discussed.

9. While observing, I completed the *checklist of tutoring components* (see Appendix D) to determine that the parent demonstrated the skills needed to implement the tutoring procedures independently at home. Any components that were omitted or



not completed accurately were reviewed and modeled again for the parent, with another chance to practice provided. Parents were given sufficient time during the training session to ask questions about all of the materials and procedures, so that they would be able to implement all components of the program at home. Prior to leaving the training session, the parent was expected to demonstrate 100% accuracy on all observed components (Gortmaker et al., 2007).

10. After all procedures were reviewed and practiced, and any questions answered, the parents signed a consent form indicating that their child may participate in the parent tutoring intervention. An assent form for each child to sign, agreeing to participate in the study, was taken home. The parents also took home a tape recorder and a prize box filled with their selected reinforcers.

**Acceptability of the intervention.** Each parent completed an acceptability rating scale (see Appendix K) at the conclusion of the training session. I explained that the survey asked questions related to the parent's perceptions about the reading intervention and ease of implementation. Although the ratings were not confidential, I left the room and allowed the parent approximately five minutes to complete the rating scale privately. The same rating scale, plus additional questions to gather qualitative data about the intervention, was given to the parent at the end of the intervention period, to determine post-treatment acceptability (see Appendix L). Parents had an opportunity to ask questions and give additional feedback about the tutoring program following both administrations (pre and post) of the acceptability measure.

**Post-training communication.** I established a format for weekly communication with each parent (e-mail or phone call), to monitor how the tutoring was going, to

provide support, to answer any questions the parent had, and to discuss any concerns regarding the intervention. Brief telephone check-ins or meetings in person were offered. However, most parents preferred to be contacted by e-mail, with only one parent opting for telephone communication.

### **Conducting the Parent Home-Based Tutoring Intervention**

Parents were contacted by phone or e-mail to begin their baseline period, and to review the expectations for baseline. Once the baseline period started for each family, several books were sent home at a time, either in a bag or in the binder. The sequence of books to follow was indicated on sticky notes. All parents were contacted during baseline to determine if there were any concerns or questions. Parents were contacted again a week or two later, depending on their sequence in the intervention phase, to notify them that their baseline period had ended and to begin the tutoring intervention that evening. The binder, containing the first tutoring book, a labeled cassette tape, and the other necessary materials for tutoring, was sent home with the child that day.

**Starting parent tutoring.** As indicated, the tutoring program was to begin for each student once a stable level of performance was observed during baseline, and after the previous student (if there was one) began to make progress. As was already the routine for the study participants, the binder, now containing all the tutoring materials, was taken home each day and brought back to school the next morning. Each student received a school-based incentive (i.e. a ticket that could be used at the school store) from the reading specialist for bringing the binder back daily and putting it in her room before school. I picked up the binders every day, took out the tapes and books from the night before, and put the next tutoring book and tape in. I reviewed the star chart and tutoring

log for evidence of program completion, and attempted to listen to each tape-recorded session. I placed the binders, ready for the next tutoring session, in the students' backpacks to take home.

The tutoring materials were organized into tabbed sections in the front of the binder for easy reference. The current tutoring book was always placed in the front pocket of the binder, along with the bookmark. The first section included step-by-step directions for completing all the components of the parent tutoring intervention (see Appendix H), and specific procedures for conducting *repeated readings* (see Appendix I).

The parents were expected to reinforce their child daily for completing the tutoring activities. Following each tutoring session, students placed a sticker in the appropriate place on the star chart. I reviewed the charts weekly, and provided a school-based incentive (e.g. a ticket for the school store) for each week that home tutoring occurred five times.

**Selection of home tutoring materials.** Books from the LLI series were selected for the home tutoring sessions in consultation with the reading specialist. The intent was to provide books at home that had already been read and practiced at school, so that there were no “cold reads” in the home tutoring. The LLI books chosen followed the instructional sequence of the school-based program, and had been used by the reading specialist earlier in the school year. They were all primarily at the students' independent reading level. Each LLI book had several black and white copies available for take-home reading, and those were typically the books used for tutoring. Students still had some other LLI books at home at the time the tutoring intervention began, but they were

encouraged to send those back in to school so as not to become confused. For the home tutoring, one book was read at home each night, five nights per week. Ideally, a different book was sent home each day and returned to school the following day.

The LLI books complemented the classroom reading materials by corresponding to the benchmark levels already used in kindergarten through fifth grade (see Appendix B for average reading levels by month). The LLI program guide, lessons, and materials for second graders corresponded to reading benchmark levels H (March of first grade) through M (end of second grade). Based on the district's reading curriculum, students should be reading at benchmark Level L in the middle of their second-grade school year (i.e. January). According to the district's reading benchmarks, second-grade students are expected to exit the year passing the Level M book. As discussed previously, benchmark books are "passed" when the student reads them with at least 95% accuracy, adequate fluency, and answers all comprehension questions correctly.

The second-grade books, used for generalization to untutored, peer-expected material, were chosen from the classroom library in consultation with the classroom teacher. At a Level M, these books were slightly above the student's reading level, and may have been at a frustration level (less than 93% accuracy) for some participants. When conducting CBM from peer-expected books for weekly generalization monitoring, reading selections of approximately 100-word passages were typed out and prepared ahead of time. I completed the reading record on the prepared sheets while the child read from the actual book.

***Independent reading level.*** To ensure that the books used in the parent tutoring intervention were at the participants' independent reading level, they were checked for

readability with a one-minute CBM probe prior to being sent home for tutoring. An accuracy rate of 95% or higher was necessary to determine the appropriate readability of the passage for each student, as this is considered an independent reading level (Fountas & Pinnell, 2009). Of the 63 books used in the tutoring intervention, 97% were at the child's independent reading level. One book with an accuracy rate of less than 95% was mistakenly sent home with two students and used for tutoring. The session was scored and used as a data point for one student (Breanna) but not for the other (Molly). When Breanna read the book at home, she had little difficulty; her accuracy was 99% and she made only one error. As the readability check was simply to ensure that a book would not be too challenging to use for tutoring, it was determined that this book was appropriate for her, and the session was scored in the usual manner. When Molly read the same book at home, it was obvious that the book was more challenging for her. She had an accuracy rate of 95% and made five errors. Her parent was notified and the session was not scored. The sequence of tutoring books merely continued for Molly as planned, with an additional session added on at the end to make up for the missed one.

### **Data Collection**

Data collection occurred for a variety of purposes, at many times throughout the study, and using two primary tools, books from school and reading fluency ratings. The dependent measure in this study was students' oral reading fluency, as measured by both the number of words read correctly per minute (WCPM) and the fluency rating score. Both procedures have been previously reviewed. Table 1 describes which data were collected, and when and where the data collection occurred. The table also describes how data were obtained throughout the study and why each data collection period was

Table 1

*Fluency data collection*

Data collection period	What data were collected?	Why?	When?	Where?	How?
Selection Criteria	WCPM from three probes using peer-expected books; two standard probes, one “beat your score” probe	To rule out performance deficits; ensure reading skills deficits	After consent is obtained; before parent training session	Data collection occurred at school	Administer two probes, determine mean score; give one more probe & incentive to beat the mean score
Baseline:					
1. Home	1. At least five probes for WCPM and fluency rating from tutoring books	To determine child’s typical reading fluency performance prior to the intervention	After consent and prior to intervention	1. During home tutoring session	1. Administer at least five probes until a stable trend is determined
2. LLI books	2. At least three probes for WCPM and fluency rating from LLI books			2. At school	2. Administer at least three reading probes
3. Second-grade books	3. At least three probes for WCPM and fluency rating from second-grade books			3. At school	3. Administer at least three probes
Intervention	Daily probes for WCPM and fluency rating from tutoring books (five per week)	To determine intervention effectiveness during parent tutoring	For one minute during the child’s first independent read	During each home tutoring session	Examiner listens to taped session and scores passage for WCPM and fluency rating

Monitoring	Weekly probe for WCPM and fluency rating from current LLI book at school (not used for tutoring)	To determine progress in untutored reading material at school during the intervention period	Once per week, during or after the LLI school-based intervention	During the intervention period; reading with the examiner at school	Examiner listens to child read for one minute; determining WCPM and fluency rating
Generalization	Weekly probe for WCPM and fluency rating from second-grade books	To determine generalization to untutored material in peer-expected books	Once per week, in the second-grade classroom	During intervention period; reading with the examiner at school	Examiner listens to child read for one minute; determining WCPM and fluency rating
Follow-up	Reading probes for WCPM and fluency rating; LLI and second-grade books	To determine if the tutoring intervention had an effect on reading fluency post-intervention	Approximately four to eight weeks post-intervention	Reading with the examiner at school	Examiner listens to child read for one minute; determining WCPM and fluency rating

included in the study design. In order to continually measure ORF and monitor the progress of the four student participants in untutored material at school, I administered two one-minute CBM probes weekly, using the current independent-level reading selection in the LLI lessons (Level K/L) and passages from peer-expected classroom books.

**Ruling out performance deficits.** Prior to intervention, a measure of oral reading fluency was used with the four students to rule out *performance deficits*, thereby ensuring with greater likelihood that the students selected to participate in the parent tutoring intervention were those with *skill deficits* in reading. Following parental consent, I obtained three CBM measures of each student's oral reading fluency (see

Appendix G for standardized administration). Reading probes of approximately 100 words each were selected from both expository and narrative samples in the student's classroom reading books. Following administration of the first two reading probes, they were scored to determine the number of words read correctly per minute (WCPM), and the mean was calculated. A third reading probe was then given during this assessment period, however, the procedure was slightly different in an attempt to determine whether the child had a performance deficit. Before reading the third passage, the participants were informed their last "score" and told they would receive a prize if they could beat that score. The third reading probe was then conducted individually, and scored according to the previously described procedures. If the child scored fifteen or more WCPM on this third probe, compared to the mean of the first two probes, then the child may be considered to have a motivation or behavioral concern rather than a skills deficit.

Noell, Freeland, Witt, and Gansle (2001) described this type of probe with reinforcement as a successful method for filtering out students who may be demonstrating performance deficits. Students having such deficits, and whose mean correct words per minute was also below grade-level expectations, may be in need of a different kind of intervention both at home and at school. However, all four students demonstrated skills deficits; none of them "beat" their mean score on two passages by more than 15 points.

**Baseline performance.** Following the training, each parent received a sequence of books to use for data collection prior to the start of the home tutoring intervention. During the baseline period, the parent audiotaped the child reading each book with no assistance provided, other than to supply an unknown word so that the assessment could



continue. Baseline lasted at least one week for the first student, until a stable trend was determined, and then the intervention was introduced to that student. The baseline period was concurrent for the participants, with each subsequent baseline lasting longer for each student (multiple baseline design). The parent did not receive any training, instruction, or additional materials during the baseline phase. Following a consistent trend of improvement during intervention with the first student (i.e. three data points showing progress, or an upward trend), the intervention phase was introduced to the next student, and so on for all four participants. Each intervention phase of parent tutoring lasted approximately three weeks, except the first student received four weeks of intervention.

**Follow-up.** WCPM data and fluency ratings were collected four to eight weeks after the intervention for each participant, using two ORF probes. One reading probe was taken from an LLI book used at school. The other probe was taken from a second-grade book that had previously been used for data collection for generalization to untutored material. A different 100-word passage from the second-grade book was used for the follow-up measure.

**Inter-rater agreement.** I scored all reading fluency assessments. My graduate student intern was trained to score the oral reading fluency data for reliability purposes. Although the intern had previous experience with CBM, I trained her to conduct the reading probes used in this study. The intern was also trained to complete the fluency rating scale by reviewing the components and then listening to and rating a selection of audiotapes, while I provided feedback. A practice session was completed in which the intern and I rated a tutoring session together and compared our ratings for consistency.

A random 20% of the passages from the parent-tutoring sessions were listened to and independently scored for reading accuracy (WCPM) and fluency (fluency rating) by the same trained intern. These included baseline and intervention sessions for all participants. Inter-rater agreement was calculated for reading rate by dividing the smaller frequency of WCPM by the larger frequency of WCPM and multiplying by 100, similar to the procedure used by Duvall et al. (1992). Inter-rater agreement for reading accuracy during the parent tutoring intervention was 96.5%.

Inter-rater agreement for the 12-point fluency rating scale was determined by calculating the percentage of scored reading passages in which the combined fluency ratings between raters were within two points, a procedure recommended by Rasinski et al. (2009). Inter-rater agreement for the fluency ratings was 50%. This low score will be addressed in discussing study limitations.

**Treatment integrity.** Treatment integrity of the parent tutoring sessions was measured through examination of the daily audiotapes and the essential tutoring components checklist. The daily tutoring log completed by parents served as another measure of treatment integrity, as the elements of each session were also documented there. The tapes and logs, collected daily from the student's binders, were reviewed and scored. Any components determined to be missing, incomplete, or performed incorrectly were discussed with the parents.

Treatment integrity was measured for each session by determining the percentage of components completed correctly, out of the 13 on the checklist. Treatment integrity would be considered 100% for that day/session if all components were completed and documented correctly, via the tape recording and/or tutoring log. It was possible to

receive partial credit, such as on a two-part item (e.g. “Parent presents and reads the questions on the bookmark”). A parent may have had the bookmark out during tutoring, but did not read the questions aloud to the child. If a session were conducted (per parent or student report) but the tutoring log not completed and the session not taped, then treatment integrity would be 0% for that session. However, this did not happen during the intervention period. Missed sessions were not penalized in terms of treatment integrity, but the reason for a missed session was determined.

### **Experimental Design**

This study used a multiple baseline across participants design. Baseline data were collected almost daily via audiotaped oral reading fluency probes in the tutored books at home. The baseline period was concurrent for the participants. Following the baseline phase, the parent tutoring intervention was subsequently implemented for each participant in the order indicated, for a period of approximately three weeks. The reading specialist determined the order of intervention for the four participants, based on their need for assistance in reading. Introduction of the intervention was staggered for each student depending on the progress of the previous student and the length of each baseline. Molly was at intervention for four weeks (20 tutoring sessions), as she and her mother requested to continue the program for another week. Kevin had 15 tutoring sessions during intervention, and Breanna and Chad each had 14 sessions. See Table 1 for a description of the data collection at each stage. In a follow-up session with each participant, WCPM and fluency ratings were collected four to eight weeks after the home-based intervention was completed.

## Chapter IV

### Results

The research questions in this study were investigated using a multiple baseline across participants design. Parents were trained to implement a repeated reading strategy at home, as an extension of the school-based reading intervention. Reading fluency data were collected at home via audiotapes of the tutoring sessions to determine if the procedure had an effect on reading fluency at home. Reading fluency data were collected at school to monitor progress in the school reading intervention and to determine if results were generalizing to the second-grade classroom.

#### Treatment Integrity

*Research Question 1: To what degree can parents implement the components of a home-based tutoring intervention?* Based on the review of the audiotaped tutoring sessions and the parents' daily tutoring logs, all five parents implemented the tutoring program with very high treatment integrity. A percentage of implementation was determined for each session by indicating the presence or absence of each of 13 essential components on the tutoring checklist (see Appendix D). All parents implemented the program components with a mean integrity at or above 96% (range 96% to 100%). Molly's mother implemented with 97.9%; Kevin's mother with 100%; and Breanna's mother with 99.4%. Chad's mother completed 10 tutoring sessions with 97.6% average integrity, and his father had an average integrity of 96% for four sessions.

*Research Question 2: How consistently can parents implement a home-based tutoring intervention as designed?* To answer this question, I determined the weekly

frequency of tutoring, the length of each tutoring session, and the length of the program for each participant. Parents were expected to conduct tutoring for approximately 15 to 20 minutes per session, five nights per week, for a period of three weeks. The high treatment integrity reported for all parents in implementation of the components provides support for their consistency with the procedures. In reviewing specific elements, it was determined that all parents implemented the program for a period of three weeks or approximately 15 sessions, with one family tutoring for four weeks. For each session, parents tutored their child for at least 15 minutes; however, some sessions more than doubled that time. The average time spent tutoring was 18 minutes per session. Some variability was noted in parents implementing the tutoring program for five nights per week. Two of the four children (Chad and Breanna) missed one tutoring session during the three weeks of intervention.

### **Acceptability Ratings**

*Research Question 3: To what degree do parents find the tutoring program acceptable as a home-based intervention?* Data regarding program acceptability were collected from the five parents immediately following the parent training and again at the end of the tutoring program (see Appendix K and L). On a rating scale from 1 (strongly disagree/not acceptable) to 5 (strongly agree/highly acceptable), the average pre-intervention rating by the parents was 4.9. This rating suggests that the parents considered the tutoring program to be a highly acceptable intervention to use at home. Three parents rated the intervention a 5.0 on all eight questions. The mean rating from all five parents following the completion of the tutoring program was 4.5, which is still considered a high level of acceptability. Breanna's mother rated the acceptability of the

intervention lowest both before (mean = 4.8) and after (mean = 3.9) implementation of the tutoring procedures. Kevin's mother and Chad's father rated the intervention a 5.0 both before and after implementation. The ratings from Molly's mother also did not change from pre to post-intervention (mean = 4.9).

The mean acceptability ratings from both Chad's mother and Breanna's mother went down approximately one point following the completion of the intervention. On the post-intervention survey, Chad's mother rated all items a 4 (i.e. agree) rather than a 5 (i.e. strongly agree). Breanna's mother rated all items lower, except for item 5 ("This intervention did not result in any negative effects for my child"), which was rated a 5 for both pre and post-intervention. Breanna's mother rated the following items lower at post-intervention: "This intervention was effective in improving my child's reading skills" was rated a 3 (i.e. neither agree nor disagree) instead of a 5; and "I would suggest this intervention to other parents" was rated a 3 instead of a 4.

### **Parent Communication and Feedback**

Based on the previous studies reviewed, I assumed that frequent communication would be needed to ensure continued parent participation in tutoring their child five times per week; however, this was not the case. Frequent communication **was** provided, but mostly to praise parents for their consistent effort and adherence to the program. Several times per week, after listening to a taped session, I would call or e-mail parents to give them feedback. The content of this feedback included alerting a parent to a missed element of tutoring, giving a suggestion, or expressing a concern that was reflected on the tape. For instance, one parent was very sick with bronchitis and could barely be heard on the tape. I e-mailed to express concern for her health and also to let her know that she

could miss a tutoring session due to illness. A few times the taped sessions were difficult to hear clearly, so I asked the parent to check the volume control and/or move closer to the tape recorder during tutoring. Occasionally, parents contacted me with questions, such as how to encourage their child to read with more expression or better phrasing, or how to balance slowing down to emphasize the words with negatively impacting reading rate/speed. E-mail response was an easy way to reply and meet their needs quickly, as well as to praise parents for their daily efforts. I also put sticky notes with praise, encouragement and/or feedback in the binders several times per week, or to remind parents about a specific implementation issue (e.g. which tape or book to use next).

As the study progressed into the intervention phase for all four participants, more feedback was given to parents than the twice-weekly communication initially proposed. This increased level of parent contact and support may have contributed to the high degree of treatment integrity reported, both in terms of percentage of program elements implemented and the consistency of tutoring sessions per week. It also became clear to me that feedback was being given differentially. The four parents using e-mail for their preferred method of contact received more feedback than the one parent (Breanna's mother) who did not have e-mail access and was only contacted by telephone. Of the four parents using e-mail, Kevin's mother received the most feedback from me, due to the reciprocal nature of our e-mail communications and follow-up comments. It is possible that these factors related to communication with the parents in this study impacted their implementation and feelings of acceptability of the intervention. Although she had the second-highest level of treatment integrity, Breanna's mother rated the tutoring program lowest in terms of intervention acceptability both before and after

implementation; she received the least support and feedback during the intervention period. Kevin's mother, who received the most support and feedback during the tutoring intervention, had 100% implementation for the treatment integrity measure, and rated the intervention a 5.0 both before and after implementation.

### **Parent-Child Interaction**

The three previous research questions focused on the parents' implementation of the tutoring program related to the fidelity, consistency, and perceived acceptability of the reading intervention. Although feedback regarding the parent-child interaction during tutoring was not typically provided to parents in this study, important information was gleaned from listening to each tutoring session that could affect the outcomes of a home-based reading intervention. Parent characteristics can influence literacy activities in the home and the dynamics between parent and child while engaged in reading. Enthusiasm toward reading and a view of reading as enjoyable are parental factors that contribute to a child's reading development and attitudes about reading (Baker et al., 1994). Parents who view reading as a form of entertainment instead of focusing solely on the skill development of reading promote more positive attitudes toward reading in their children (Baker, Scher, & Mackler, 1997).

Research in family literacy posits the importance of the adult-child interaction and relationship in the achievement of functional goals, which includes a relative balance of motivational and instructional functions (Pianta, 2004). If the child does not perceive the parent relationship as a supportive and secure base for exploration, then the relationship may not function to support instructional goals for reading development. In observing parent-child interactions, characteristics such as responsiveness, degree of cooperative



involvement, physical proximity, caregiving, and the emotional tones exchanged both verbally and nonverbally are important to consider (Pianta, 2004). In any situation, the child has views regarding how helpful, supportive, engaged, demanding, negative, or punitive they can expect the parent to be. One would expect these views to either facilitate or interfere with the interaction between the child and parent in a given activity, such as shared reading. With a literacy intervention involving the context of the family, such as home-based tutoring for reading, it is important to acknowledge that components of the parent-child relationship and interaction can impede the function of the relationship to support literacy development by communication and motivational processes and/or instructional skill acquisition (Baker et al., 2001; Bus et al., 1995).

Obviously, the adult-child interactions and relationships are a key component in a parent tutoring intervention, and could be further explored in the current study for any differential impact on reading outcomes. In terms of the reading activities being fun and enjoyable, Chad and his father were often heard laughing, making jokes, and generally having fun during tutoring. He often altered his voice for different characterizations in the books. He gave Chad frequent praise for both his reading skills and his effort. However, his father also had the lowest mean percentage of program components implemented and tended to leave out asking questions about and making connections to the story when reading with his son. Chad's mother had the next lowest percentage of implementation, in terms of treatment integrity. She had a fast-paced approach and a hurried voice, and was more scripted in the tutoring process. Although she made some connections to the book and their personal experiences, she did not offer as much praise

as Chad's father. She and Chad both appeared to want to be finished with the tutoring session as quickly as possible.

The parent with the highest implementation of program components was Kevin's mother (100%). She had a less-scripted style, but with a serious quality to her voice that did not sound like she was having fun. She sounded supportive and interested, however, and engaged in much discussion with her son about the book, including vocabulary, genre, and author's intent. She provided corrective feedback in a helpful manner. However, at times, she and Kevin engaged in disagreements and had differing opinions, mostly about the prize box choices, which led to frustration that was apparent on both sides. Kevin's mother allowed her son time to talk about the book and make connections to the story and personal experiences. She appeared to use the scripted procedures as a guide, making them fit her own personal style while still including each component in every tutoring session.

Breanna's mother also had very high implementation, over 99% of the tutoring elements. She had a slower style and comfortable approach. Her voice sounded relatively slow, expressive, and supportive. She and her daughter appeared to be having fun with the tutoring, and often laughed and talked about the books they liked best, made predictions, and discussed the moral of the story (for fables). She was the only parent to consistently alter her voice to represent various characters in the stories. Breanna's mother offered consistent and frequent praise to her daughter; she very rarely provided constructive criticism or pointed out mistakes made during reading.

Molly's mother had close to 98% overall implementation of the tutoring components. She was more scripted in her approach, and would reference the steps in the

tutoring process much of the time. She appeared to be very engaged and to enjoy the interaction with her child. Molly's mother gave much praise and encouragement, but also pointed out mistakes in a way that sounded punitive and caused Molly to become defensive and even withdrawn at times.

### **Reading Fluency**

The remaining three research questions involved determining if improvement in children's reading fluency could be attributed to the parent home-based tutoring intervention. To answer these questions, fluency ratings and reading rates (as measured by WCPM) were analyzed for each student at baseline, during intervention, for progress monitoring and generalization, and at follow-up.

### **Intervention Data Results**

*Research Question 4: Does adding a parent home-based tutoring program to a school-based reading intervention increase students' reading fluency in tutored books?*

Words read correctly per minute (WCPM) data were examined using visual analysis of the graphs. Although all four students showed increases in WCPM following the implementation of the intervention, the changes are relatively small and do not consistently follow an upward trend (see Figure 1). All students showed initial increases in their fluency rating in the tutored passages when the intervention was introduced (see Figure 2). However, these increases were not consistently maintained during the intervention period.

Changes in fluency rate cannot be attributed to the intervention for the four participants. Percentage of non-overlapping data points (PND) were also considered, in which the lowest intervention point is compared to the highest baseline point; a

percentage of overlap in the data points is determined. The PND suggests that the intervention was more effective for one student (Molly) than for the other three; she had a PND of 100%. According to guidelines for interpretation by Scruggs and Mastropieri (1994), the PND for the remaining participants indicated an intervention of “questionable” effectiveness for a second student (Chad), and an intervention with “no observed effect” for the other students (Kevin and Breanna).

Baseline and intervention data were collected for each student in three different settings: at home by the parent, in school by me using the reading intervention materials, and in school by me using second-grade reading materials. In all conditions, oral reading fluency probes were used to assess WCPM and accuracy, which represented reading rate, and a fluency rating scale provided a measure of prosody, examining three areas (i.e. phrasing/expression, pace, and smoothness) using a scoring rubric of 12 possible points.

**Baseline and intervention results for home tutoring.** Data for Figures 1 and 2 were collected from the audiotapes of the participants’ reading at home with their parents in the tutoring books. The means and ranges for all participants at baseline and intervention are shown in Tables 2 and 3.

Table 2.

*Baseline and Intervention Means and Ranges: WCPM for Home Tutoring*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	WCPM	Range	WCPM	Range
Molly	76.0	65-85	101.0	86-115
Kevin	90.8	60-111	109.8	91-126
Breanna	77.0	63-92	85.1	63-121
Chad	97.8	77-110	112.7	85-144

Figure 1. WCPM During Tutoring Intervention by Participant.

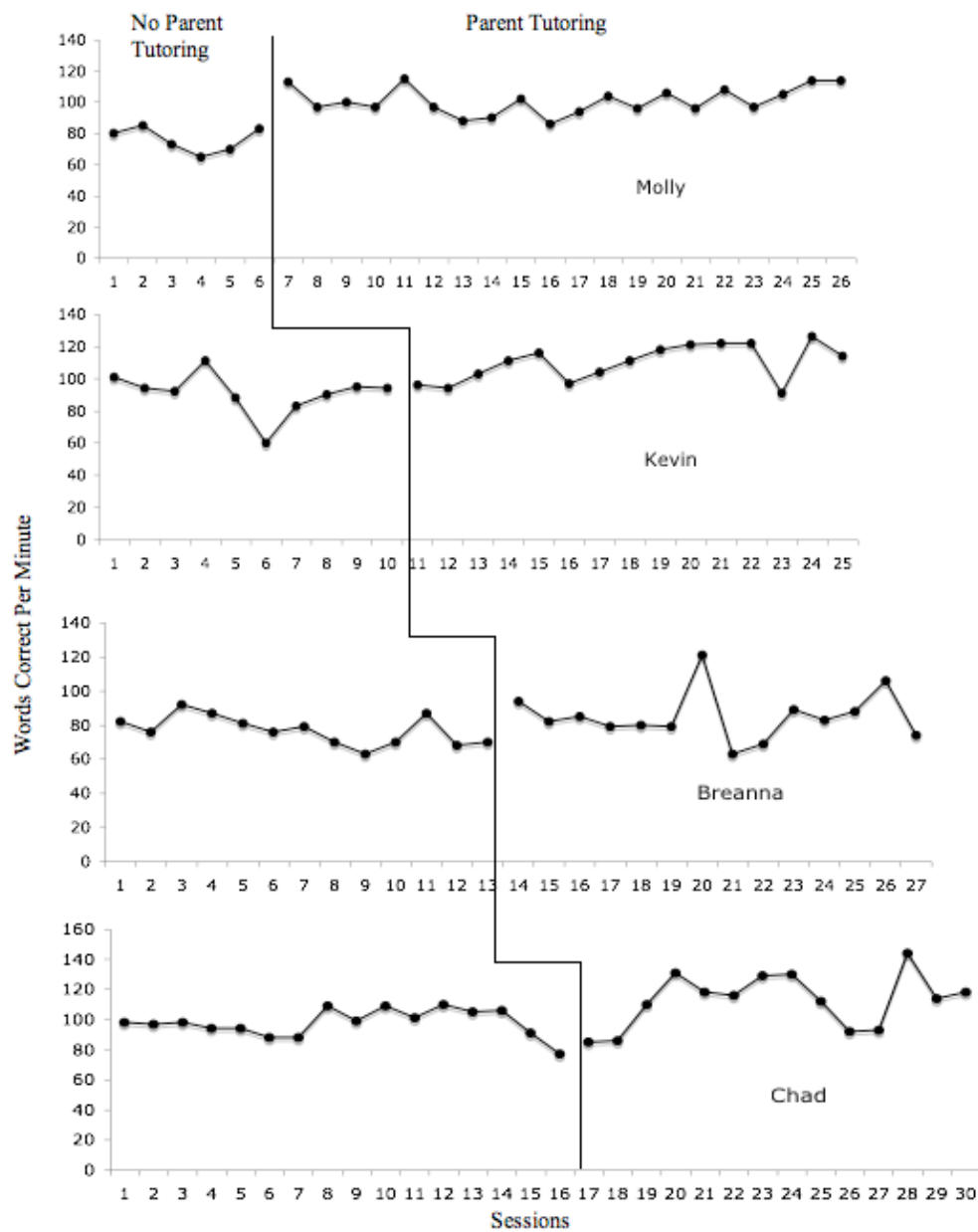


Figure 2. Fluency Ratings During Tutoring Intervention by Participant.

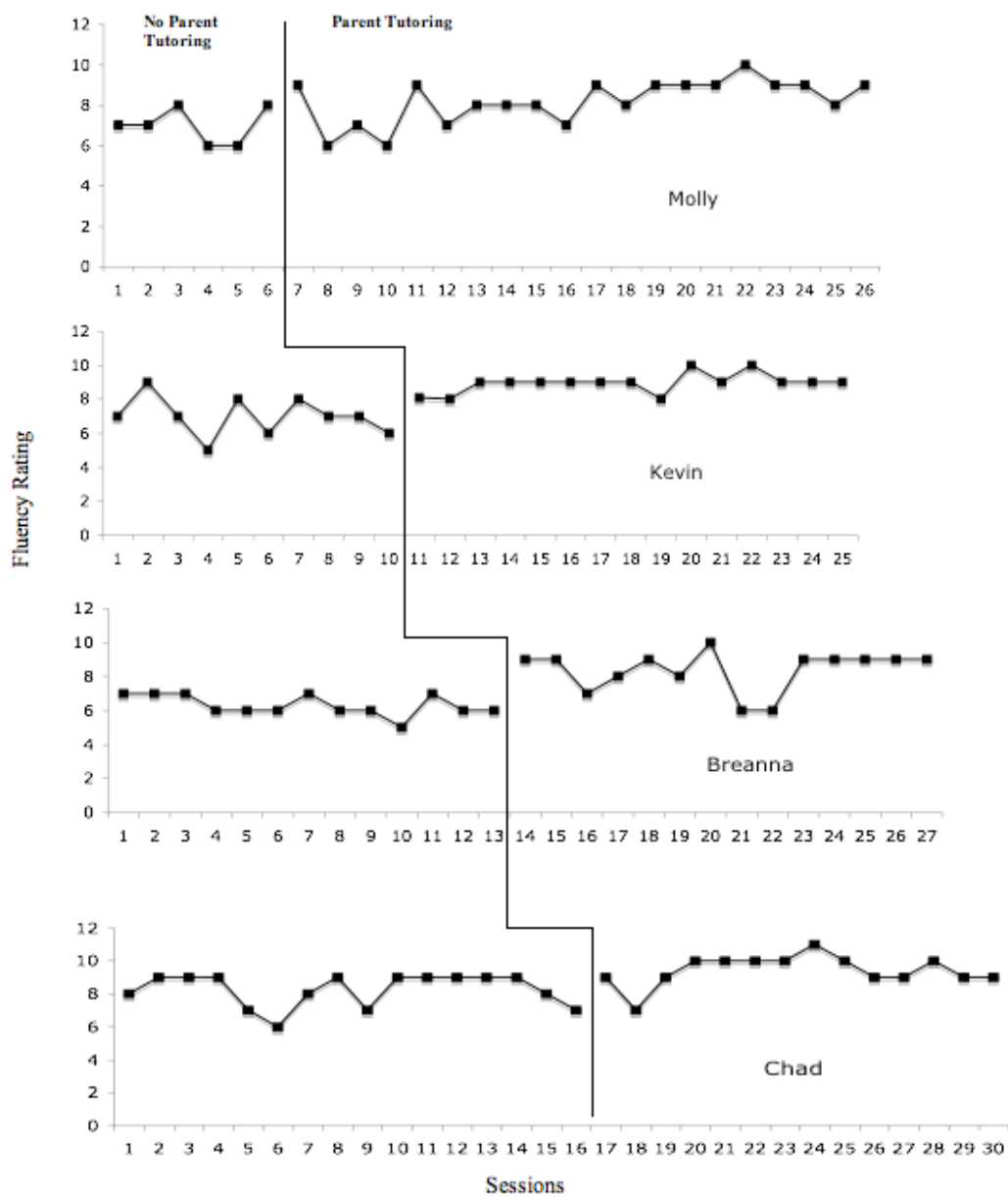


Table 3.

*Baseline and Intervention Means and Ranges: Fluency Ratings for Home Tutoring*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	Fluency Rating	Range	Fluency Rating	Range
Molly	7.0	6-8	8.2	6-10
Kevin	7.0	5-9	8.9	8-10
Breanna	6.3	5-7	8.4	6-10
Chad	8.3	6-9	9.4	7-11

**Effect of parent tutoring on reading fluency of individual students.**

**Molly.** The student with the lowest average baseline performance appeared to make the most progress, with an improvement of 25 WCPM over her mean baseline score. However, her baseline was on an upward trend prior to the intervention and there is no way of determining whether she would have continued to improve in the absence of the intervention (see Figure 1). PND was 100%, indicating that all data points during intervention were higher than any of her baseline data points. Although Molly read one book with only 92% accuracy, she also read 30% of the tutored passages with 100% accuracy. Her average reading accuracy during intervention was 98.5%.

**Kevin.** Only Kevin had a truly stable baseline before the tutoring intervention. Although his baseline was initially quite variable, with one outlier score 30 points lower than the mean, it leveled out prior to the start of the intervention. His last three data points fell within a range of only five words. Kevin's initial increase following implementation of the intervention was only 2 WCPM. However, he showed a mean increase of 19 WCPM. Kevin's accuracy rate was 98% or above on all passages, for an

average of 99% accuracy during both baseline and intervention. He read 60% of the passages with 100% accuracy.

**Chad.** Chad began the intervention with the highest means for both WCPM and fluency ratings, and continued to show the highest mean scores at the end of the intervention period (see Tables 2 and 3). Chad's data showed a downward trend at the end of his baseline period. Prior to that, his WCPM scores had been fairly stable, within a range of about 20 words. During the intervention period, Chad had the largest range in scores of all participants (see Table 2). His accuracy on the reading passages during intervention was 97% or higher.

**Breanna.** Breanna showed the smallest increase in reading fluency, for an improvement of about 8 words over the three weeks of intervention. Her baseline was relatively stable, with an average of 77 WCPM. Breanna also exhibited a large range in her reading rate (see Table 2). She began intervention with the lowest fluency rating of all participants (see Table 3). Breanna had a 99% accuracy rate for reading during both baseline and intervention periods.

**Effect of parent tutoring on untutored material.** *Research Question 5: Does adding a parent home-based tutoring program to a school-based reading intervention increase students' reading fluency on untutored reading material and peer-expected classroom books?* Progress was monitored at school using weekly one-minute CBM reading probes in both the LLI and second-grade books, neither of which were used for parent tutoring. Data for baseline and progress monitoring during intervention were collected from books used for reading instruction at school that were not used in the parent tutoring. Figures 3 and 4 depict the data collected at school from passages in the



LLI books (Level K/L) used during daily reading intervention with the school's reading specialist.

**Baseline and intervention results for LLI books.** Baseline and intervention means and ranges for each participant are shown in Tables 4 and 5. In the LLI books, accuracy rates were not as high as in the books used for home tutoring, which had accuracy rates above 98% for all participants and were at an *independent* reading level. In the LLI books, the accuracy rates were all below 98% (range 95% to 97.9%) and suggested that the books used were at an *instructional* reading level for the students. Both Breanna and Kevin showed extreme variability in their baseline scores, with a range of 72 WCPM and 52 WCPM, respectively (see Table 4). Breanna had the lowest mean for both WCPM and fluency rating. All students scored substantially higher on the third reading probe given compared, to their previous read (a difference of between 35 and 67 words), suggesting a relatively easier book was used for that particular CBM.

Across all participants, reading rates (WCPM) were lower in the LLI progress monitoring passages at school than in the books used for tutoring at home. Negligible increases over baseline performance were found for three of the four participants in the LLI reading books, ranging from 0.4 to 2 WCPM. Breanna's improvement of 0.4 WCPM was the smallest. Her reading rate was very consistent (82 or 83 WCPM) on all passages, and her reading accuracy ranged from 95% to 99%. Kevin showed the most improvement in reading rate, with a mean increase of 8.2 WCPM from baseline to intervention. His accuracy was 99% or higher on all three passages.

Figure 3. WCPM in LLI Books for Progress Monitoring by Participant.

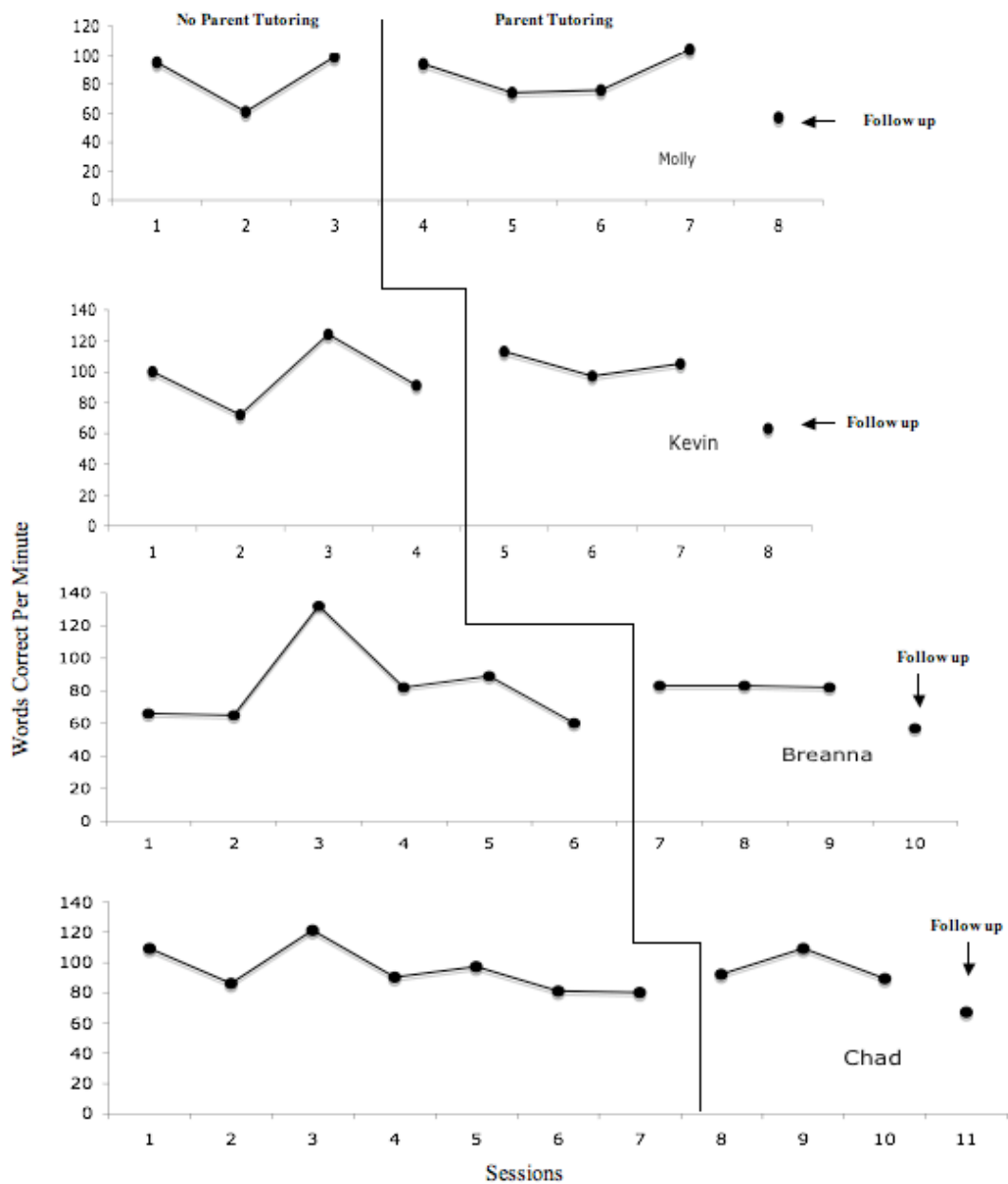
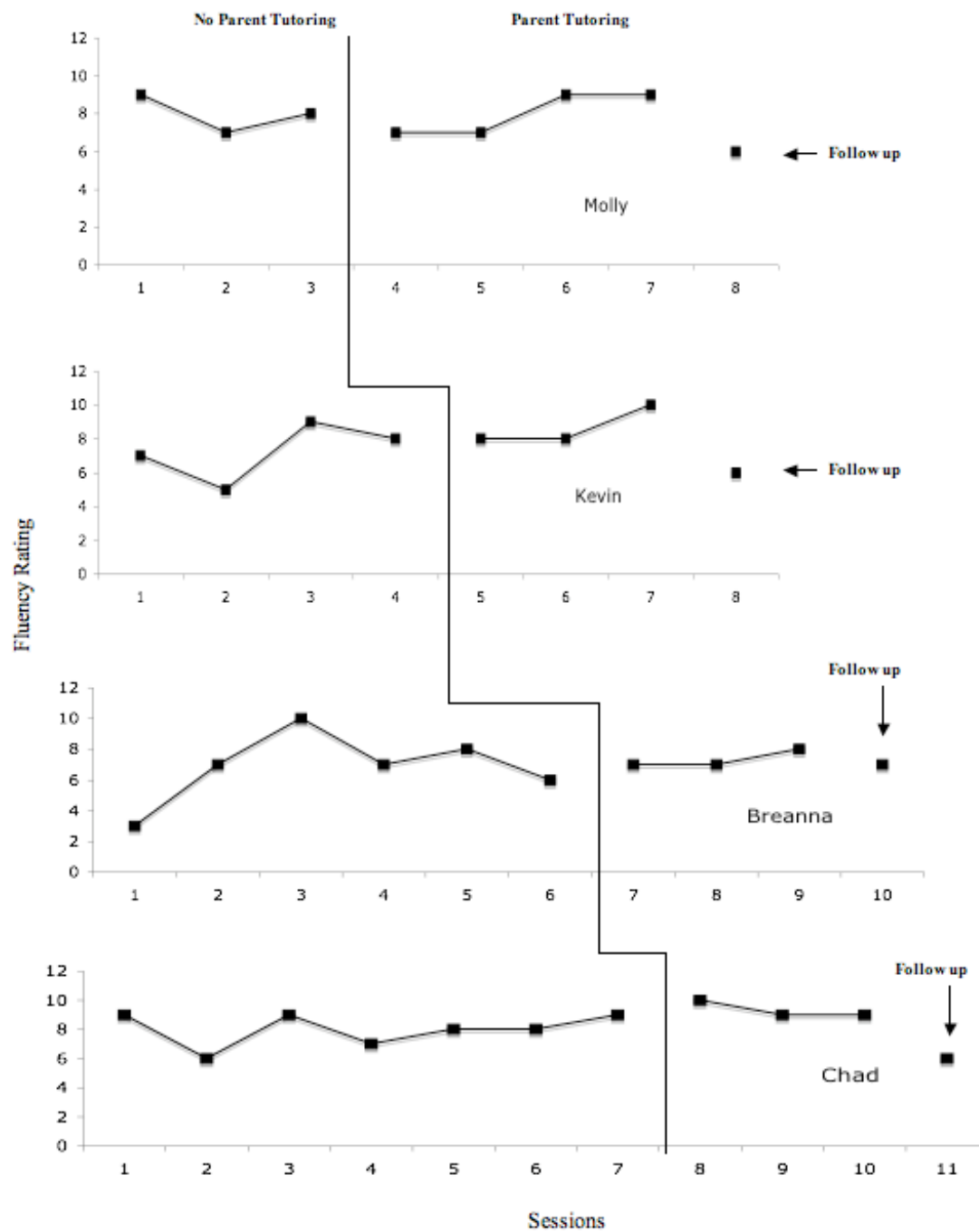


Figure 4. Fluency Ratings in LLI Books for Progress Monitoring by Participant.



Fluency ratings showed slight improvement over baseline for three out of four participants in the LLI passages at school; however, this cannot be attributed to the tutoring intervention due to variability in baseline performance. Based upon visual inspection, scores looked the same during the baseline and tutoring periods.

Table 4.

*Baseline and Intervention Means and Ranges: WCPM in LLI Books at School*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	WCPM	Range	WCPM	Range
Molly	85.0	61-99	87.0	74-104
Kevin	96.8	72-124	105.0	97-113
Breanna	82.3	60-132	82.7	82-83
Chad	94.9	80-121	96.7	89-109

Table 5.

*Baseline and Intervention Means and Ranges: Fluency Ratings in LLI Books at School*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	Fluency Rating	Range	Fluency Rating	Range
Molly	8.0	7-9	8.0	7-9
Kevin	7.3	5-9	8.7	8-10
Breanna	6.8	3-10	7.3	7-8
Chad	8.0	6-9	9.3	9-10

**Baseline and intervention results for peer-expected books.** The data in Figures 5 and 6 represent words read correctly per minute and fluency ratings in passages taken from Level M books used for reading instruction in the second-grade classroom. Tables 6 and 7 show the baseline and intervention means and ranges for generalization to second-grade books for all participants. Chad had the highest baseline mean for both

WCPM and fluency rating, while Molly had the lowest mean on both measures. As expected by the more challenging grade level material, accuracy rates were lower for all students in these books, with means ranging from 94.7% (Chad) to 90% (Molly).

Figure 5. WCPM in Second-Grade Books for Generalization by Participant.

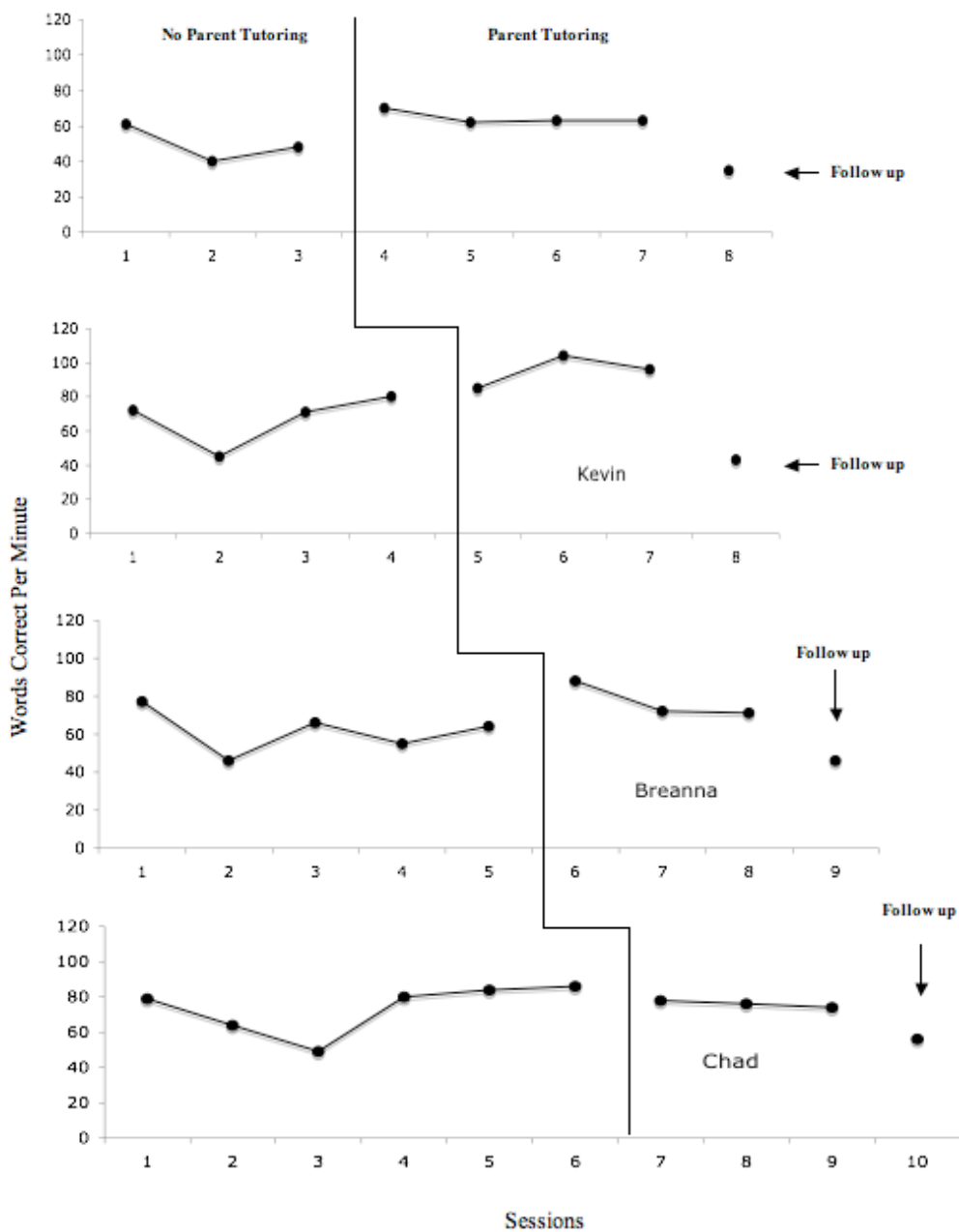


Figure 6. Fluency Ratings in Second-Grade Books for Generalization by Participant

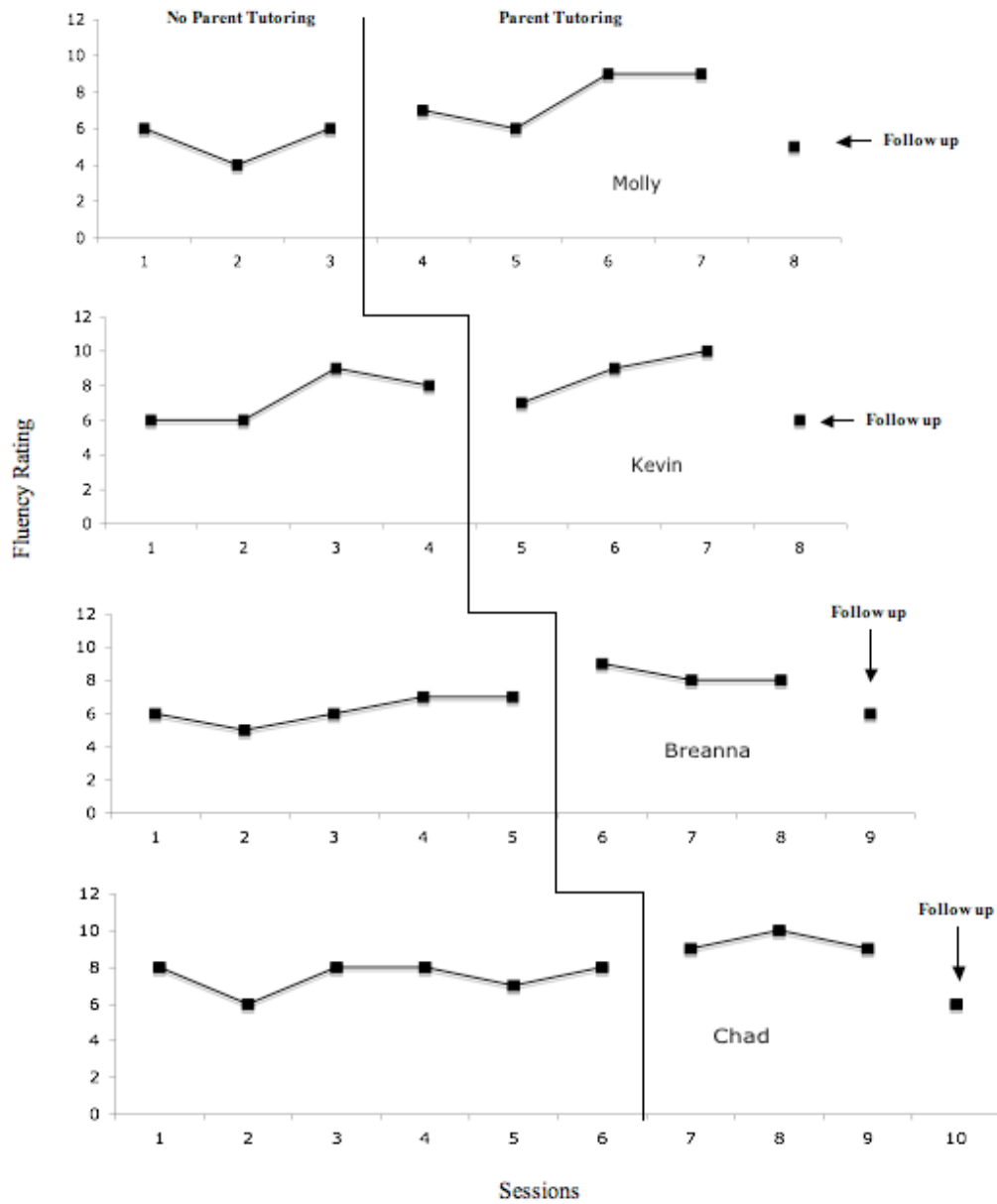


Table 6.

*Baseline and Intervention Means and Ranges: WCPM in Second-Grade**Books at School*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	WCPM	Range	WCPM	Range
Molly	49.7	40-61	64.5	62-70
Kevin	67.0	45-80	95.0	85-104
Breanna	61.6	46-77	77.0	71-88
Chad	73.7	49-86	76.0	74-78

Table 7.

*Baseline and Intervention Means and Ranges: Fluency Ratings in Second-Grade**Books at School*

<i>Participant</i>	<i>Baseline</i>		<i>Intervention</i>	
	Fluency Rating	Range	Fluency Rating	Range
Molly	5.3	4-6	7.8	6-9
Kevin	7.3	6-9	8.7	7-10
Breanna	6.2	5-7	8.3	8-9
Chad	7.5	6-8	9.3	9-10

The baseline data for the peer-expected books contained one relatively low score for all four participants. On the second reading probe, three students scored significantly lower than their previous score (a difference of 20 to 30 words). Their accuracy rate in this passage was below 90%, indicated a particularly challenging book, at the students' *frustrational* reading level.

All participants also showed increases in reading rate in the second-grade passages used for generalization to untutored, peer-expected books. These increases were greater than those found in the LLI progress monitoring passages. In the peer-expected books, as in the LLI books, Kevin showed the most improvement, increasing from a baseline mean of 67 WCPM to a mean of 95 WCPM (28-word difference). His accuracy rate was 97% to 98% on all three of the second-grade passages. Molly's accuracy tended to be lower, ranging from 93% to 99% across four passages. Chad showed the least improvement over his mean baseline performance; however, his accuracy was high, between 97% and 99% for the three passages. Fluency ratings in the second-grade classroom books during the intervention period showed some improvement for all four participants. Upon visual inspection, however, scores were generally very similar to baseline. Only Breanna had 100% of non-overlapping data points; she and Molly had the largest increases in fluency, more than 2 points on the rating scale.

**Follow-up.** Although the tutoring intervention could not be considered to improve reading fluency for the four participants, follow-up data were still collected about four to eight weeks after the intervention ended using the reading fluency scale and a CBM probe from both LLI and second-grade books. Fluency data on WCPM are presented in Figures 3 and 5, and on reading prosody in Figures 4 and 6. Upon visual inspection, results indicated scores below the intervention means for all participants in both reading books. The follow-up data points closely resembled the baseline means for reading fluency across participants.



**Teacher Feedback**

*Research Question 6: Do the student's classroom teachers report meaningful improvement in reading fluency?* During exit interviews, the reading teacher and second-grade classroom teacher both indicated improvement in student's confidence when reading and motivation to read in the classroom. The second-grade teacher also reported improvement in the way their oral reading sounded for all four participants, however, data on reading outcome measures, such as benchmark tests, were not available post-intervention.

## **Chapter V**

### **Discussion**

The results of this tutoring intervention study are discussed in terms of program outcomes for students, parents, and teachers. Feedback provided by students, parents, and teachers during the course of the intervention are reviewed. Practical implications for parent tutoring intervention programs and lessons learned regarding implementation and parent-child interactions during tutoring are highlighted. Finally, recommended changes to the tutoring intervention and procedures, limitations of the current study, and future research considerations are shared.

#### **Discussion of Results**

Four second-grade students in the same classroom participated in a parent training intervention for reading fluency. Following a training session at school for the parents and a baseline data collection period, each parent implemented the tutoring procedures at home with their child for at least 14 sessions over a period of three to four weeks. With regard to Research Questions 4 and 5 that focused on measurable outcomes, the results do not provide clear support that the tutoring intervention led to a consistent measurable improvement in reading fluency for the four student participants. However, many important points regarding the ability of parents to implement a home tutoring program and the essential elements of such an intervention were gleaned from this study.

**Parent-tutoring program outcomes.** The parents implemented the components of the tutoring intervention daily, with few exceptions, and with high fidelity overall.

Feedback from the parent participants indicated positive perceptions of the reading intervention in terms of use, acceptability, and results.

**Teacher outcomes.** Input from the classroom teacher and the reading specialist both indicated that the children as a group were more confident readers during the intervention. The classroom teacher also noted that the students showed improved interest, enthusiasm, and reading fluency (in terms of prosody) as a result of the intervention, and that it helped them “to read better.” However, these perceptions were not confirmed in the data collected.

### **Explanation of Results**

Parent implementation was high, as determined by a mean of 96.5% for treatment integrity, and pre- and post-intervention satisfaction ratings indicated that parents liked the tutoring program and thought it was a useful intervention. Parents and teachers alike reported increased confidence and interest in reading for all participants. However, the parent tutoring intervention could not be considered effective in increasing reading fluency. There are several explanations for these findings.

In examining previous studies that reported positive effects on reading outcomes using a parent reading tutoring intervention, a common element was the use of a structured and systematic error correction technique. In the current study, I asked parents to identify and correct errors as the child read, but did not employ a systematic approach in doing so. During the parent training session, I modeled how to point out any errors the child made, to use the reading bookmark, and to supply the correct word if the child could not figure it out independently. The child did not specifically have to repeat the correct word or reread the entire sentence. An explicit error correction technique such as

the one used by Duvall et al. (1992), or a similar version by Hook and DuPaul (1999), would have been advantageous within the repeated reading strategy. In that technique, the parent follows the same procedure for every error made during reading. The parent points to the error and states the correct word, the child repeats the correct word, and then rereads the entire sentence that contained the error word. The child is verbally praised each time he or she reads that sentence correctly, then and on future readings. This strategy would be relatively easy to train parents to implement and would provide a more consistent approach to addressing reading errors. If the error correction occurred during an earlier read, as will be discussed next, then the child could apply this knowledge to future readings and other times the error word is encountered.

The timing and manner in which fluency data were collected during the repeated reading sequence at home was problematic and considered to be a major limitation to the effectiveness of the intervention in this study. In order to conduct the reading probes during intervention, the parents audiotaped the entire tutoring session. I listened to each session and assessed WCPM and prosody of reading; a one-minute reading probe was needed with no assistance provided to the student. In developing the intervention, I decided the beginning of the third read, after the parent reads to the child and then they read together, would be a good time to collect the reading fluency data. The parents were instructed to provide no support during the third read, except for supplying a word if the child was “stuck” to allow the reading (and data collection) to continue. Following the third read, the parent could then provide error correction and other support. However, in this manner, all the assistance from error correction essentially occurred during the final read, *after* the fluency data had been collected for that tutoring session. The next day, a

different book was used, so the child still might not get to apply or practice the word knowledge gained from repeated reading with error correction, unless the books contained many of the same words (Resetar, 2003).

To address this intervention design problem, collecting the WCPM and prosody data following the fourth read of the book (the child's second independent read) would have allowed for maximum benefit of the error-correction component of the intervention, as the child would be applying the skills they had just learned from the error correction technique to their final reading. A procedure similar to the one used by Duvall et al. (1992) and Hook and DuPaul (1999), in which the parent does a one-minute "check" of the child's reading at the end of the session, with no error correction provided, noting the stopping point and any errors made, is recommended as an improvement to the current intervention. As the tutoring sessions were taped, I would be able to score the same one-minute reading "check" for both WCPM and prosody, and compare my results with the parent's assessment.

In both the Duvall et al. (1992) and Hook and DuPaul (1999) studies, the material used for the repeated reading intervention were short samples from the basal readers used for reading instruction at school. The child was expected to do the repeated reading based on how far he or she read in the target book within a set amount of time (e.g. four or five minutes); the child was not expected to read the entire book. Instead, he or she practiced reading from the starting point to the determined stopping point, until time was up. In this manner, each subject was able to complete at least 2 repetitions of the reading passage with systematic error correction, prior to the reading check for data collection. Shorter passages, rather than reading the entire book, would have allowed for more

efficient use of time, more practice within the same book, shorter tutoring sessions as the books became longer, fewer books being used at home, and increased student motivation.

I believe that these three primary modifications to my study (a systematic error correction technique taught to parents, data collection following the final repeated reading, and shorter reading passages at home) would have resulted in a stronger, more effective reading intervention, leading to increases in reading fluency that could have then been linked directly to the parent tutoring intervention.

There are a few other considerations that, based on the research reviewed, could have also helped to make the intervention stronger and more effective. Several studies that showed positive effects with parent tutoring included reading activities targeting specific skill areas in the intervention. Resetar (2003) taught parents to use reading strategies related to skill development in phonics, fluency, and comprehension during each tutoring session. Rasinski and Stevenson (2005) included examples of activities that parents could include during tutoring, with two types of practice activities required and documented on the tutoring log, for each session. Additionally, Gortmaker et al. (2007) used *brief experimental analysis* to determine the most effective intervention or combination of intervention elements for each student, in order to increase reading fluency. Adding a more specific training component to the repeated reading strategy in the current study, such as targeting phonics skills or vocabulary development, may have resulted in greater improvement in students' reading outcomes.

A longer baseline period, at least for the first subject, could have assured a stable baseline trend prior to the intervention period. All subjects showed increases in reading fluency (both WCPM and prosody ratings) immediately following the implementation of

the intervention, but in the absence of a stable baseline, it is not possible to link the home tutoring intervention to the observed increases in reading fluency. It may have been that the students were making progress in reading fluency as a result of the interventions in place at school. Similar to the inconclusive findings of Coates and McLaughlin (1992), slight improvement during the intervention period may have been related to practice in the reading books at school, not from the home tutoring intervention. Even small increases or improvements in reading fluency following a stable baseline of performance could still be evidence of an effective intervention. According to Hasbrouck and Tindal (2005), the average weekly progress of a typical second-grade student is an increase of only 1.2 words read correctly per minute.

Another consideration is that in almost every study reviewed, the subjects are performing relatively low in overall reading skills, compared to classroom peers and grade-level reading expectations. In fact, Rasinski and Stevenson (2005) found a significant difference in reading outcome measures only for the lower half of the control and intervention groups; an overall main effect for treatment was not observed. The four students included in this study, although some of the lowest readers in their second-grade class, were only slightly below grade level, and thus, relatively higher performing compared to most subjects included in research-based reading interventions reviewed in the literature.

### **Parent Feedback**

Descriptive comments and feedback were elicited from the five parents who participated during exit interviews and on the post-intervention survey. At some point during the intervention period, all parents indicated that they thought the intervention was

working, and that their child was reading faster and sounding better. Some reported changes at home (e.g. choosing to read more often) and improvement in their child's confidence and attitude toward reading, which they attributed to the intervention. In general, parents reported that they liked the tutoring and thought it was an acceptable intervention for increasing reading skills.

All parents indicated that the tutoring program was a good way to get their child to read on a regular basis and that it was "reasonable" to implement for three weeks. One parent reported that although the intervention was time consuming, "it was fun." Another parents said, "We enjoyed listening to each other read...and discussing" the books. In describing the strengths and/or what they liked about the intervention, four out of five parents used the words "enjoyed" or "liked" in reference to the parent-child interaction. Kevin's mother shared, "I was especially thrilled to learn that my child does enjoy books." Molly's mother responded, "She was excited about the reading each day and this helped to build her confidence." Increased confidence in reading was a consistent theme during the exit interview. Kevin's mother reported, "I enjoyed the one-to-one time with my child, as well as watching him gain more confidence" when he reads. According to his father, Chad has shown an increased confidence and interest in reading, and has started picking up books and "reading on his own now," which is reportedly something he had never done at his father's house prior to the tutoring intervention.

The intervention provided structure and explicit procedures to follow with the 15-minute routine. Some parents indicated that the structure and materials were helpful so that they knew exactly what to do at home. Kevin's mother indicated that the procedures helped her learn to engage her son more in reading "by asking questions and picture



walking.” According to Molly’s mother, the daily intervention during the week was reasonable to establish consistency and routine, so that the child “knows what to expect.” Kevin’s mother also responded that it was reasonable to implement each day, and acknowledged, “having to read every night got my child into a habit...he just thought it was part of his homework.”

Although two parents said “yes” it was reasonable to implement the intervention every weekday, three parents replied that it was not. Breanna’s mother noted that it was usually fine, but was “a little too long with other homework” some days. Chad’s mother and father both said “no,” it was not reasonable to do every weeknight. His father shared that they did not get home until later some evenings due to “sports,” so it was sometimes difficult to find the time to read each night. Chad’s mother also indicated that “every day is not possible” due to sports, homework, and other family commitments. It should be noted that the three parents reporting it was not feasible to implement every night were the same ones who missed one night of implementation during the tutoring phase (Breanna and Chad each had 14 tutoring sessions instead of 15). The two parents who reported that it was reasonable to implement five nights per week did indeed implement the tutoring procedures five nights per week. Additionally, Molly and her mother completed an extra reading (five repeated readings instead of the expected four) for two sessions.

In considering implementation differences among families, a few patterns emerged. The two stay-at-home mothers in the study, Kevin’s and Breanna’s, had the highest level of implementation in terms of treatment integrity, with 100% and 99.4%, respectively. Other parents in the study had more constraints, but still managed to follow

the program with a high level of integrity. Although Molly's mother reported that she commutes a long distance for her job, she was able to implement the program for an extra week and with average treatment integrity of 97.9%. Molly showed the most progress in the intervention, relative to the other participants and appeared to enjoy it the most. She and her mother asked for an additional week of materials to continue the tutoring procedure for a fourth week; her mother also asked Molly to complete extra repeated readings for two sessions. Chad's parents had the lowest treatment integrity (mother 97.6%; father 96%). His parents indicated that it was difficult, given his after-school sports schedule, to find time each night for the tutoring. The sharing of materials and tutoring responsibilities between two households also provided more room for error. Yet they still managed to achieve over 96% treatment integrity.

In general, the data and feedback indicated that, in this school community, even very busy parents with other children at home, extra curricular activities, and long work days were able to implement the intervention. Most parents (3 out of 5) reported that it was reasonable to implement the intervention for 15 minutes per session. Kevin's mother shared that "the time went by quickly" and was not too frustrating for her son, except when the books "got harder and longer." Kevin reportedly did not mind doing four readings of each book. Four out of the five parents noted that it took longer than 15 minutes towards the end of the intervention, as the tutoring books were longer. One parent noted that the last books "required 30 minutes" to complete the intervention. According to Molly's mother, "it was a reasonable amount of time to keep the child focused and interested." However, Kevin's mother noted that he "sometimes became frustrated and fidgety" if the books were too long. She also noted that his "attitude

changed” when he didn’t like the book. This suggests the importance of finding materials that the student likes, as well as those at the appropriate reading levels. The increasing length of the sessions was an unanticipated effect, as the books the students read became longer.

### **Student Feedback**

The student participants gave feedback on the home reading program during an exit interview at school, following the final progress monitoring. Three of the four students reported that they liked the intervention. Two of these students actually said that it was “fun.” Chad noted, “Well, I would rather watch TV, but my mom signed up for it so I have to” do it. Molly and Chad shared that reading the books (i.e. “the reading part”) was what they liked the best about it. Similarly, Breanna noted that she liked listening to her mother read, “so that when I read I could know the words.” Kevin liked the prizes the best. When asked what they did not like about the intervention, Molly shared that she did not really like “the treasure box” because she didn’t need it. Chad did not like “the part where you had to read it four times,” and Kevin did not like the “long books.” Breanna indicated that she didn’t like “reading together” with her mom, noting that part was harder to do (i.e. trying to keep the same pace while reading together).

When asked if they would do this program again, Molly and Kevin said “yes.” Breanna said she would do the program but not the “reading together part.” Chad replied, “I don’t know. I guess if my mom made me.” Three of the four students said they would recommend this tutoring intervention to other second graders and their families. It is interesting to note that Chad said he would recommend it to other kids, while Kevin was the one student who said he would not; the reverse would be expected.

Overall, Molly and Kevin said they “loved” the tutoring intervention, Breanna “liked” it, and Chad said it “was O.K.” Overall, the students’ perceptions of the tutoring intervention were positive; the majority liked it, would do it again, and would recommend it to other children and families.

In general, the students’ reactions were very positive at school also. Three of the four students approached me every day, to turn in their binders and get their next book to take home. Only Chad did not seek me out at school. However, he was not resistant to discussing the program, taking home the materials, or completing the readings for data collection at school. The three students often asked if I had listened to their tapes yet and shared stories of their tutoring sessions. These students seemed to enjoy the positive attention at school, including being pulled from class for the weekly fluency monitoring and the readability checks. They all eagerly anticipated their reward at school for completing five days of intervention at home.

It was apparent by listening to the tapes that Chad enjoyed the intervention the least of all the student participants, based on his affect and comments during tutoring. He often tried to begin reading before his parents could engage him or ask questions about the book. He sometimes refused to do the picture walk, stating, “I already know this one.” It was apparent that Chad read quickly and with less accuracy at times in an effort to essentially “get it over with” faster.

### **Parent-Child Interactions**

As Chad’s responses illustrate, the results of the tutoring intervention also provided qualitative information about the dynamic between the parent and child; the home interactions were different in each family. Audiotaping the sessions provided a

systematic way to determine what was “going on” during the intervention and the *quality* of the parent-child interaction during reading. The examiner was able to listen to each parent implement the tutoring intervention with their child. Although this was certainly time consuming, the information gleaned from both the fluency data and the qualitative experience of hearing the actual parent-child interaction was invaluable.

Although all parents indicated during the exit interview that they liked this reading intervention, the qualitative data available on the audiotaped sessions revealed many insights. The approach to the tutoring procedures differed with each parent. Chad’s mother could be heard to take a “let’s just get this done, so we can move on to other activities” approach, while others (Chad’s father, Breanna’s mother) appeared to be more present, genuinely having fun with their child. Some were more scripted for each session, and implemented the procedures almost exactly as written in the tutoring guidelines. They made sure each step was finished, but in a rather rote way (Chad’s mother). Other parents appeared more comfortable with the procedures and made them their own, while staying close to the supplied script (Molly’s mother). Some went “off script” and spent time discussing the book, relating it to a personal experience, or asking many questions to engage the child (Kevin’s mother, Breanna’s mother). During one session, Kevin’s mother highlighted the difference between fiction and nonfiction text, and then asked him which kind the particular book was and why.

Some parents demonstrated more patience and involvement in the reading sessions than others. Sometimes feedback was delivered in a gentle and encouraging manner; sometimes it was more critical. Molly appeared to become discouraged by the corrective feedback, even though her mother generally delivered it in a supportive

manner. Breanna's mother was especially hesitant to give any negative feedback, delivering more praise and little constructive criticism to her daughter. Additional coaching with this parent would have been preferred, but she was harder to reach with limited access to e-mail.

### **Parent Implementation Differences**

Other qualitative differences in implementation were evident from the audiotapes. Chad and his father could be heard having fun and laughing while reading and shared a more playful quality in their interaction than when he read with his mother. However, Chad's father sometimes allowed him to skip the picture walk and questioning part of the pre-reading because Chad said he had already read it. Generally, Chad's father stated the title of the book and then began reading to Chad. Although Chad's mother always engaged him in a short discussion, she talked very quickly and moved through the tutoring steps in a concise way.

On the other hand, Breanna's mother took her time and talked slowly, spending more time looking at and discussing the book before starting to read. She and her daughter could be heard going through each book page-by-page and commenting on the pictures and story. Her mother sounded very interested in the books and remembered reading many of them as a child. In each session, she communicated this enthusiasm to her daughter, and they appeared to really enjoy the time spent reading.

Kevin's mother also spent much time previewing and talking about each book with him. Kevin asked his mother many questions and shared many comments, both prior to and during their readings. This led to conversations between the two of them; however, his mother sometimes had to refocus his attention to the story to finish the

readings. Kevin and his mother had some difficulties after the readings though, related to choosing from the prize box. Kevin often could not decide which prize to choose and took an extended amount of time looking over and considering all his options. His mother tried to alleviate this by having him decide at the beginning of each session which prize he would be “working for.” Kevin would choose one initially, prior to starting the tutoring, but then would still re-evaluate his choice or change his mind afterwards. His mother’s frustration was evident on the audiotapes and this clearly spotlighted how children may respond differently to rewards and incentives. For Kevin and his mother, it became a source of frustration and was not necessary. His mother noted that he would have worked just as hard and completed the four readings without any incentives. For him, the parent-child interaction and the extra attention from his mother, as well as the structure of the intervention, were sufficiently motivating.

### **Suggestions for Improving the Tutoring Program**

A number of suggestions for adjusting the tutoring program were made by the parents, students, and teachers. According to the feedback provided by the five parents who participated, allowing for more flexibility was recommended. One change suggested was with the time required. According to Chad’s father, the “only thing that was difficult” in terms of program implementation was “finding the 20 to 30 minutes each night to read together.” Another suggestion related to the choice of books. Kevin’s mother recommended allowing the student to choose the book to read for tutoring. She noted that her son was not as eager to read when the books were not as interesting to him. The number of repetitions was cited as a concern. Breanna’s mother shared that her daughter sometimes grew tired of reading after the third time, so perhaps it was “one too

many reads.” She acknowledged providing cues to stay focused. Chad’s mother also reported that he didn’t like “the high number of repetitions” in the tutoring and so it was “hard to keep him engaged.” His baseline also lasted the longest of the four participants, which made the whole program “seem longer” than three weeks to his family.

**Shorter passages/fewer books.** The biggest parental concern was the amount of time it took to finish four readings and that the length of the book was sometimes discouraging. The sequence of the leveled books in the LLI series presented a challenge in this study. The intervention used so many books, about 30 altogether during baseline and intervention periods, it moved faster than the classroom lessons. In the classroom LLI lessons, one book was at instructional level and one book was independent level, throughout the series. The books used for tutoring were at independent level only, so every other book in the LLI series was selected for the tutoring. Even with backing the sequence up and selecting books from much earlier in the school year, we essentially ran out of books to use that had already been read during LLI lessons at school.

In theory, the books sent home were to be the same ones already read and practiced at school. This was to further expand the use of parent tutoring as a means of increasing the opportunity for children to respond in their curriculum materials (Duvall et al, 1992). However, because five books were being used each week for home tutoring, and only two were used per week in the school-based LLI group, the sequence of the tutoring books ended up moving faster than the school-based intervention. The tutoring intervention caught up to and then ended up working *ahead of* the school-based intervention group. The home intervention moved through book levels G to K/L (see Appendix B) in a period of three weeks, which was not instructionally appropriate and



did not match the school program. As the last few books got closer to grade level, they were longer and relatively harder. With the multiple baseline design, the children later in the sequence tended to have longer and harder books to read than those who started the intervention earlier. An easy solution would have been to use selected 200-word passages out of just a few books. I could have used several passages for tutoring from the same book, thereby reducing the number of books needed during tutoring, as well as the length of each passage (i.e. students would not need to read the whole book).

Reflecting on this concern, there is no reason that the study design had to use entire books for the repeated readings. Most studies reviewed in the literature used 200-word passages or set a timer and had students read for a few minutes and then just re-read that portion of the text. Therefore, using short passages in a few books is recommended, rather than reading the entire book four times. Although some parents indicated that four rereads was too many, the research consistently supports this number in a repeated reading strategy (Therrien, 2004). Two-hundred-word passages in just three to five books would have been ideal for the intervention; perhaps a different book could be used for each week of intervention. This would have also addressed the issue of using too many LLI books and moving ahead of the classroom intervention with the readings. One parent recommended allowing the child to choose the books to read for greater interest and enthusiasm about the reading. Their reading may sound better (i.e. increased prosody) if children are reading books they like. This is something that future research could consider.

**Training on prosody.** Another issue that came up involved the prosody element of reading fluency. One parent had a question about her child's reduced *reading*

*expression* because he was trying to read too fast; she wanted to know if she could tell him to slow down and read better. Actually, two parents made this connection and wanted feedback about how to address it. The intervention may have been stronger if I had spent more time during the parent training session discussing with all parents what “good reading” means and what it sounds like; alerting them to the fact that children cannot read both quickly and with good prosody, and so directing children to read quickly has the effect of less expressive reading (Kuhn et al., 2010).

An improvement to the parent training would have been to go over the reading fluency rubric with each parent, describing in more detail and with examples, each area of reading fluency that was being measured (i.e. pace, smoothness, phrasing/expression). It was not ensured that each parent had the same perception of what *reading fluency* meant in this intervention, beyond how many words the child was reading per minute (i.e. reading quickly and accurately). This impacted the feedback that parents provided to their children during the intervention. One parent told her child to “slow down” and pronounce each word correctly, while another was concerned that her child’s reading sounded too slow. I was able to give feedback and clarification to some of the parents as this issue came up, but it was not consistently addressed with each parent.

**Schedule for feedback.** Another improvement to the parent training would have been to set up a regular schedule (i.e. every Tuesday and Thursday at 4:30) for communication with each parent. The communication could have been provided in the manner in which the parent requested, telephone or e-mail. This would have allowed the feedback provided to be more consistently delivered across participants. The way it worked out, more feedback was provided to Molly’s mother and Kevin’s mother than the

other two participants families. They were more likely to solicit feedback from me. Breanna's mother received the fewest contacts and less feedback than the other parents did. She did not have access to e-mail, and could not be reached as easily as the other parents.

### **Lessons Learned/Practical Implications**

Based on an extensive review of the literature, it appears that this was one of the few studies to connect a home reading intervention with the school's reading intervention, beyond just using grade-level materials and books and/or measuring an academic or school-based outcome. The study was designed in consultation with the school's reading specialist, using elements of the reading intervention program and the same materials that she was using in her reading intervention group with the study participants.

One positive point in this study was that a father served as a participant, which few previous parent-tutoring studies have reported and is very infrequent in the reading intervention literature. Although he only tutored for five sessions, he still implemented the tutoring components with an average of 96% accuracy.

Although the intervention was not effective in demonstrating improvements in students' reading fluency, some important observations were found about how the parents in this study implemented the intervention. These observations may help inform others who are implementing home-based reading interventions. Perhaps the most important finding was that the parents followed all procedures and were able to implement the intervention as designed. All five parents implemented the components of the intervention at a high level, at or above 96% treatment integrity. This high level of

implementation indicated that modeling how to perform a task, providing the necessary tools and resources to perform the task, and then following up with frequent monitoring can result in parents implementing a process as designed. All the parent participants in this study could and did do what was asked of them at home. However, the parents received a considerable amount of contact and support. I provided frequent feedback to the families, sometimes daily, and in a variety of ways, which required unanticipated extra time. Since tutoring sessions were being listened to daily for data collection, there were inherently more opportunities to provide feedback to parents. Sticky notes were often sent home on the binders, mostly giving encouragement and praise but sometimes with reminders about implementation components. If a question or comment arose while reviewing the tapes, an e-mail could be sent immediately to the parent. A suggestion might be given, for example, to model linking more words together in one breath. Parents generally used the feedback given in the next tutoring session; an advantage of audiotaping all sessions was that the parents' application of specific feedback could be heard on the tapes.

In terms of communication with parents, scheduled times (e.g. twice per week) may be more feasible, as long as parents can contact the experimenter with any questions or concerns earlier if needed. It is likely that the frequent communication in this study, more than twice per week for most parents, was a factor in the high degree of implementation. Future research in parent tutoring interventions should examine how much support is needed to ensure treatment fidelity.

The parent training sessions were harder to arrange than anticipated and sometimes took longer than an hour. The training sessions were all held at the school, so

the hours that the building was available for use presented a conflict for some parents, as did traveling and child care. Two training sessions were divided up into two 30-45 minute segments, which better fit our schedules (mine and the parents). For these two sessions, the review of materials and teaching portion occurred first, and the demonstration/modeling for the parent to observe and the practice session with feedback occurred in the second session. The issue of needing a co-presenter to serve as the “child” for the parent training session became problematic, due to the schedule of the graduate student intern who was covering at two other schools (an unforeseen complication) while this study was being conducted in the late spring.

Another important lesson learned was that it was possible to manage the intervention among/between divorced parents, for a child who spent equal time living in each home. However, some additional considerations were needed (two parent training sessions, two tape recorders, two prize boxes). One binder was used to hold all materials and traveled between the homes. Although there was an increased chance of materials being left at one house when they were needed at the other, it was still workable with only minor issues. Instead of one book per night, several books were sent home with this student and labeled with the order in which to read them. For one session, there was confusion regarding the take-home book and a different book was used for tutoring (not an LLI book). In that situation, an extra book was sent home for a make-up session over the weekend. This student was able to complete 14 out of 15 home sessions using the assigned books.

The use of a tutoring binder for each student made for easy implementation and carriage of materials from school to home and back. Everything could be kept in one

secure place and picked up daily by the examiner. Knowing the binder needed to be brought back to school each day, the tapes listened to and coded, and the next book sent home certainly also impacted treatment integrity, putting some pressure on the parents to comply. The binder also included a log of the tutoring activities for each night as another integrity check.

It is recommended that future studies on parent tutoring utilize either audio or videotaping. Occasionally, parents stopped or paused the tape to take breaks or deal with environmental distractions. Although taping may not guarantee an accurate representation of every tutoring session, it is an improvement over only using a tutoring log or review of permanent products to document the implementation of the intervention components. Recording all sessions was possible for the parents involved in this study, and ensured their compliance with the tutoring program, as well as a high level of treatment integrity.

Resetar (2003) recommended a weekly group meeting in place of individual phone conferences. In her study with a home tutoring intervention, she found the phone calls were often brief and the parents were distracted by childcare responsibilities. She recommended a group meeting instead, which would allow parents to share concerns openly with the consultant and other participants and provide a source of support and reinforcement for program implementation. I would not make the same recommendation. Most parents in the current study would not have been available to come in to school for a weekly meeting. Group meetings might not respect confidentiality and could limit what the parents say or are willing to share in front of other parents. The parents in the current study were perhaps more honest about what they needed and their mistakes during

implementation because feedback was delivered privately and individually. Most parents also preferred to use e-mail, which made it much easier to stay in consistent and frequent contact with them. However, not all parents might have a computer or access to e-mail. As previously addressed, in this study, more frequent and immediate feedback was provided to parents having access to and preferring to use e-mail for communication of their needs and concerns.

Although the current study did not demonstrate success in increasing reading fluency skills, generalization of results must always be planned for and considered in any study. For home tutoring to be a viable intervention option, generalization of skills from tutored passages at home to some academic task or classroom performance variable are critical. Parents may report face validity of an intervention and improvement in other factors such as attitude, interest, and reading motivation, which are positive outcomes. However, for an intervention that requires valuable time, effort and commitment at home, it is important to determine that the tutoring assists children in their skill development and links to some aspect of future learning.

### **Implications for Future Research**

The current study used repeated reading with error correction as part of a home tutoring intervention, which research supports as an effective strategy for improving reading fluency and comprehension skills. It is possible the tutoring intervention would have been effective if a more structured error correction technique were employed and a basic decoding strategy added. Additionally, within the repeated reading sequence, the data collection on reading fluency occurred during the child's first independent read,

before the child could fully benefit from error correction and support by the parent. These methodological weaknesses should be addressed in future studies.

Additional research on reading tutoring interventions should include families from various cultural and socioeconomic backgrounds to determine if treatment integrity and intervention implementation are impacted by these factors. The parents in this study, primarily Caucasian and college educated, typically had access to e-mail and preferred this form of communication. They all continued the intervention as designed for at least three weeks of implementation at home, rarely missing a session, which was not consistently indicated in the literature on parent tutoring interventions.

Future studies on parent tutoring should consider parent characteristics and social-emotional variables related to the parent-child relationship during implementation of a home intervention. Although all five parents in the present study, and the majority of student participants, perceived the intervention as a positive experience, perhaps there are some factors or variables that influence the parent-child tutoring relationship in a negative way. The existing supportive nature of the parent-child relationship may make reading skill development at home more or less likely (Pianta, 2004). Some parents may be differentially willing and/or comfortable providing corrective feedback to their children, or eliciting assistance and contacting a researcher for support during the implementation of an intervention. Motivation, incentives, parent-child relationship factors, and the manner in which feedback and constructive criticism are delivered to children are all areas to consider for future research in parent tutoring interventions.

In addition to the repeated reading with error correction and metacognitive strategies, the current study could have offered the child other ways to solve unknown



words. As fluency is just one element of reading instruction, addressing other areas would be an important addition to the research literature. Although focusing on one aspect made the program easier for parents to administer, other strategies might have had more impact on other areas of reading. For example, future studies of parent tutoring interventions could focus on comprehension and train parents to implement evidenced-based strategies in that area. Recent studies have suggested a causal link between reading prosody and reading comprehension, which would be a more current area of reading fluency to explore.

### **Limitations**

The studies examined in the literature review on parent reading tutoring typically implemented the intervention at home for at least 10 weeks, although one lasted only three weeks (Resetar, 2003), similar to the current study. Other studies with short home tutoring periods have cited the length of the intervention as a limitation. Although three weeks of intervention did not allow for many data points from school, at least 14 data points were available from the home tutoring sessions. The results in this study do not necessarily support that a longer intervention period would lead to improved outcomes, as the student receiving an extra week of tutoring did not perform much differently than the other participants. Additionally, the shorter intervention time may have contributed greatly to the high level of implementation by parents; they may be much less willing to continue tutoring for five nights per week if the intervention were to last 10 weeks.

The inter-rater agreement scores on the fluency scale were low (about 50% agreement), although inter-rater agreement was high (96.5%) for the more objective and easier to measure speed and accuracy, reflected by WCPM. Prosody is a more subjective

aspect of fluency and harder to measure. Kuhn et al. (2010) posited that it is uncertain whether rating scales will ever have the precision needed to contribute to measures of reading fluency beyond speed and accuracy. Even with extensive training of researchers (e.g. Rasinski et al., 2009) the two studies reviewed reported inter-rater agreement on fluency rating scales ranging from 79% to 86% (Rasinski et al., 2009). In the present study, I should have included a stronger training component for completing the fluency ratings. A training session involving the reading specialist, me, and my intern, in which taped samples were selected, listened to, discussed, and then scored until adequate agreement was reached would have been beneficial. With more intensive training, modeling, discussion of components and feedback from the reading specialist and/or classroom teachers, the rating scales could have been a better contributor to a measure of oral reading fluency.

The timing was another limitation to this study. By the time all the parents were trained and ready to begin implementation, it was close to the end of the school year. Classroom instruction was winding down and not as consistently delivered, the last three days of school were half-days for the students, and the school year was an extra week long in June due to weather closings during winter. Additionally, the LLI reading group ended prior to the last week of school. Given the multiple baseline design, this had major consequences for the program. The first students receiving the intervention benefited from more school-based instruction than the last two students in the study. The last student (Chad) was still in the intervention period beyond the last day of school, and finished out his tutoring program with no school-based instruction or LLI reading intervention. Ideally, this intervention would start early in the school year, soon after

reading groups were formed and school-based reading intervention had begun, as an add-on component to that intervention.

The LLI program may also present a limitation in this study. Essentially a packaged program, it was used because it was the expected intervention for the group of second-grade students with whom the reading specialist was working, and not necessarily because it was the best-matched reading intervention to address their individual reading skill needs. Also, the second-grade teacher was not involved instructionally in either the LLI program at school, which occurred outside of the regular classroom setting, or the parent tutoring intervention at home. The teacher was not given much information regarding her students' performance during the reading intervention or how to support or adapt the intervention strategies to the classroom reading group. A more integrated and collaborative reading intervention, involving the classroom teacher, reading specialist, or school support staff and the child's parent, may be beneficial and result in improved reading performance at home and at school.

Another limitation in the study was related to generalization to untutored text and classroom performance. Although data were collected weekly in the second-grade books to determine increases in WCPM and fluency ratings, they were not linked to any authentic classroom reading data, such as classwork performance, assessments, or oral reading in the context of the second-grade reading group. An improvement to the study would have been to collect classroom reading data, such as reading records administered by the teacher or standardized test results, and elicited teacher feedback through pre- and post-intervention rating scales.

A final limitation of the current study was that it was conducted in a suburban school district, with primarily Caucasian students from college-educated families. Given the intervention design improvements recommended, the study could be replicated to determine results and level of implementation of the tutoring program with other student/parent populations.

### **Conclusion**

Reading fluency is a major component in reading development and includes both the pace and expression with which one reads. By providing frequent and positive reading experiences and opportunities at home, parents can foster both skill development and positive attitudes in their young readers. Empirically supported reading behaviors include enhancing attention to text, promoting interactive reading and comprehension, and using literacy strategies.

For this study, a reading intervention was developed that would extend the current school-based reading intervention into the home, for extra reading practice using the school materials and strategies. Parents were trained and supported in implementing the intervention, and did so with high treatment integrity. The feedback from parents in this study was overwhelmingly positive; families enjoyed the home tutoring program and the time spent reading together. Qualitative considerations and useful information about the implementation of a home intervention were learned.

The current study demonstrated that when materials and training were provided, strategies were easy to use, and intervention implementation was monitored frequently, parents were willing and able to provide consistent and structured home support for reading. It is important that advice and suggestions to parents be specific enough to be

useful (Eptstein & Dauber, 1991). Specific information and knowledge about what to read, how long a reading session should last, what to do when children have trouble or make errors in reading, how to discuss a reading text, and how to keep the experience positive, may be necessary for parents to feel more comfortable and confident helping their children with reading activities at home. (Smith, 1988).

(Date)

## Appendix A

### Study Participation Request Form

Dear Parent,

Your child is being considered for participation in a study that I'm conducting as part of my graduate program through the University of Maryland. The study will examine a home-based approach to help improve a child's reading fluency. Parents will read to their children using materials provided, for about 15 minutes each weeknight, for three weeks. The intervention will also involve listening to your child read and providing support and encouragement.

If you agree to participate in this program, you will be taught how to implement the reading strategies at home during a one-to-one meeting with the school psychologist. The parent meeting will be held at school, at a time that is convenient for you. You will receive all necessary materials at that meeting, and have an opportunity to ask questions. The school psychologist will also be available on a weekly basis to provide support while you carry out the program and to discuss any concerns you may have. There are very minimal risks associated with participation in this study. All tutoring sessions will be tape-recorded, which is necessary for data collection on the reading intervention at home. Data collection will also occur at school several times per week, during the normal school day, to monitor your child's progress with the intervention and with his/her overall reading performance. Any data collected will be used solely for the purposes of the study. Confidentiality of records will be maintained, records will be kept in a locked file cabinet, and your child's name will not be included in any reports. Your involvement in this study is voluntary; you are free to withdraw your consent to participate at any time.

If you are interested and able to participate in this study, please indicate below and return only the second page form to your child's teacher, in a sealed envelope (see enclosed). The school psychologist will be contacting you to set up a time to meet and go over the specifics of the intervention. If you have any questions about the study, please contact me at school, Monday through Friday, at 410-313-2560.

Sincerely,

School Psychologist

\_\_\_\_\_ Yes, I would like to participate in this study and learn more about an intervention to help my child with his/her reading skills.

\_\_\_\_\_ I need more information before making a decision, please call me.

\_\_\_\_\_ No, thank you. I will not be able to participate in this study.

Parent's Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Daytime Phone Number(s): \_\_\_\_\_

Appendix B

County Benchmark Levels

**Average Reading Levels by Month**

	September	October	November	December	January	February	March	April	May	
<b>K</b>	Emergent A/B →									
<b>1</b>	Early 1 →									
	A/B	C	D	E	F	G	H	I		
<b>2</b>	Early 3 →									
	J	K →							L →	M →

**Note:** Some students may seem to regress when learning a new skill. These levels are guides to help us better understand where the typical student is at any time of the year. These are not a substitute for the PRIAG but rather a helpful clarification.

**Expectations:**

1. Master Emergent by end of the year.
2. Master E2 by end of the year.
3. Master FL by end of the year.



## Appendix C

## Fluency Rating Scale

**Fluency Rating Scale****Date:** \_\_\_\_\_

Circle # for each category: Ratings of 3 and 4 on all scales = reasonable fluency

<b>Phrasing/Expression</b>	<b>Pace</b>	<b>Smoothness</b>
1 monotone; word by word; no attention to punctuation	1 slow	1 frequent pauses, sound-outs and repetitions
2 choppy – 2/3 word phrases; little attention to punctuation	2 moderately slow	2 several pauses/rough spots that are disruptive
3 some mid-sentence pauses for breath; some attention to punctuation	3 mixture fast/slow	3 occasional pauses for hard words
4 generally well-phrased; consistently attends to punctuation	4 consistently fast	4 generally smooth reading, conversational

Total Score = \_\_\_\_\_

## Appendix D

## Checklist of Essential Program Components

The examiner will circle *Yes* or *No* for each program element. Presence or absence of these elements will be determined by observing the parent training session, listening to the audiotaped tutoring session, or by review of the tutoring log.

Date of session: \_\_\_\_\_

- Y N Parent starts the tape recorder and says the date.
- Y N Parent engages child's attention to the book by reading the title.
- Y N Parent asks child a question related to the book title or cover art.
- Y N Parent encourages child to preview book and do a "picture walk."
- Y N Parent presents and reads the questions on the laminated bookmark.
- Y N Parent reads the book aloud, with expression, pointing to the words on the page as she/he reads.
- Y N Parent and child briefly discuss what was read.
- Y N Parent and child read the book together aloud, at least once.
- Y N Child reads the book alone, at least twice.
- Y N Parent provides reading support to child. If the child misses or stumbles on a word, parent waits for child to self-correct, uses bookmark and/or helps the child sound out the word.
- Y N Parent provides verbal praise to child after each independent reading.
- Y N Parent completes the tutoring log.
- Y N Child offered a reward from the prize box.

## Appendix E

## Tutoring Log

Please fill in the blanks and circle the appropriate responses.

Date: \_\_\_\_\_ Time Session Started: \_\_\_\_\_

Book Title: \_\_\_\_\_

Number of Repeated Readings (circle one): 1 2 3 4 5 +

Was the bookmark used during reading? YES NO

Was a reward given to the child? YES NO

Which reward was chosen? \_\_\_\_\_

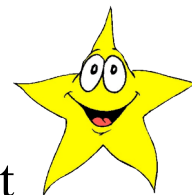
Was a sticker put on the star chart? YES NO

Time Session Ended: \_\_\_\_\_

## Appendix F



## Tutoring Star Chart



	Week 1	Week 2	Week 3	Week 4
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				

## Appendix G

### Procedure for CBM Reading Probes

1. The student and examiner sit side by side at a small table, in a quiet part of the classroom if possible.
2. The examiner gives the student the reading book, keeping a typed copy in which to follow along while the child reads.
3. The examiner tells the student the title of the story, provides a brief description, and asks a simple comprehension/prediction question related to the picture on the page or cover.
4. The student previews the passage and indicates when he/she is ready to read.
5. When the child is ready to read, the examiner says, "I want you to read this book aloud. As you read, I will follow along and make some notes." The examiner then says, "Ready? Start reading" and times the student for one minute using a stopwatch.
6. As the child reads the passage, the examiner follows along, marking any errors, miscues and/or self-corrections on her own copy, and indicating where the student was when time expired.
7. Errors consist of any words read incorrectly, skipped or not read within three seconds. Self-corrections and pauses are noted, but not scored as errors. Assistance is given only when a child does not read a word after three seconds, to facilitate continuing with the assessment. When this occurs, the examiner supplies the word and asks the child to keep reading.

8. After one minute, the examiner says, “Stop,” takes the passage from the child, and offers praise for the child’s effort. If the child is close to the end of the passage, the examiner may allow her/him to finish reading, circling the one-minute stopping point on her copy of the text.

## Appendix H

### Directions for Parent Tutoring

1. Get out the tutoring binder and tape recorder, and sit down with your child in a comfortable location.
2. Take out all necessary materials: the book for that night, the directions for repeated readings, the reading bookmark, the tutoring log and the appropriately labeled tape.
3. Start the tape recorder; say, “Tutoring session” and give the date.
4. Follow the directions for *Repeated Reading*, including using the reading bookmark to figure out unknown or unfamiliar words.
5. Give verbal praise for effort, and offer your child a reward from the prize box.
6. Place a sticker on the appropriate day of the star chart (your child can do this).
7. Turn off the tape recorder.
8. Complete the tutoring log.
9. Place all materials back in the binder, and return binder to school the next day.

## Appendix I

## Repeated Reading Procedure

1. The parent and child sit side by side and prepare to read the book. The parent engages the child's attention to the book by reading the title, asking a question about the story related to the title or the cover art, and allowing the child to preview the book with a "picture walk" through the pages.
2. The parent reads the laminated bookmark, reminding the child of the questions to ask while reading and trying to figure out unknown words.
3. The parent reads the book aloud, with expression, pointing to the words on the page as she/he reads. When finished, the parent and child briefly discuss what was read.
4. The parent and child read the book together aloud, keeping pace with each other (the parent may be slightly ahead of the child). After the first read-through together, the parent asks if the child feels comfortable and is ready to read the book alone. If the child responds, "yes", proceed to step 5; if the child says, "no", then read the book together a second time.
5. The child reads the book alone, at least twice, with the parent providing reading support (**the first independent read will be used for fluency data collection, so the parent does not provide support, other than to name an unknown word after three seconds**). If the child misses or stumbles on a word when reading independently, the parent waits a few seconds and then uses the bookmark to help the child figure out the word. If the word remains unknown, it is told to the child.



6. The parent provides praise and encouragement to the child after each independent repeated reading (e.g. “You did a great job!” “Very good,” “Super reading!” “You really read with expression,” or “You figured out those hard words.”).

## Appendix J

**Good Readers and  
Writers Ask:****Does It Make *Sense*?****Does It *Sound* Right?****Does It *Look* Right?**

## Appendix K

## Parent Intervention Survey

Please consider the parent tutoring procedures that have been described to you. Read each question below and circle the number that best describes your agreement or disagreement with each statement.

	SD	D	N	A	SA
1. This is an acceptable intervention for reading concerns.	1	2	3	4	5
2. This intervention should be effective in improving my child's reading skills.	1	2	3	4	5
3. I would be willing to use this intervention at home.	1	2	3	4	5
4. I would suggest this intervention to other parents.	1	2	3	4	5
5. This intervention would not result in any negative effects for my child.	1	2	3	4	5
6. This intervention is a reasonable way to improve my child's reading skills.	1	2	3	4	5
7. I like the procedures used in this intervention.	1	2	3	4	5
8. Overall, this intervention appears beneficial for my child.	1	2	3	4	5

SD = Strongly Disagree

D = Disagree

N = Neither agree nor disagree

A = Agree

SA = Strongly Agree

## Appendix L

## Parent Intervention Survey (post)

9. Please describe the strengths of and/or what you liked about this intervention:

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10. Please describe the limitations of and/or difficulties with implementing this intervention:

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11. Was it reasonable to implement the intervention every weekday?    YES    NO

Why or why not?

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12. Was it reasonable to implement the intervention for 15 minutes?    YES    NO

Why or why not?

---

---

13. Was it reasonable to implement the intervention for at least 3 weeks?    YES    NO

Why or why not?

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