

TRAINING PARENTS TO USE ERROR CORRECTION SKILLS:
AN INITIAL EVALUATION

by

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DISSERTATION ABSTRACT

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Schools today are faced with a growing number of students who fail to acquire basic early literacy skills. To effectively meet the needs of all students, schools must utilize strategies and interventions that are both effective and efficient. One strategy that schools may use to meet the needs of all students is implementation of a multi-tiered model of academic support. Within a multi-tiered model of support, a continuum of evidence-based interventions are in place to support all students. However, even with this continuum of support many students continue to struggle to acquire basic reading skills. Academic parent training is one approach to supplementing the supports provided within a multi-tiered model to further support students who struggle to acquire basic reading skills. Previous research has demonstrated the efficacy of parent training for improving student reading outcomes, however, effects of parent training on parent behavior have yet to be evaluated. The present study addressed this gap in the literature by evaluating an academic parent training program designed to be used as a supplement for children receiving an evidence-based reading intervention in a clinic setting.

The present study examined (a) whether a functional relationship exists between academic parent training and increases in parental error corrections and parent-delivered

praise statements and (b) whether effects found in the clinic setting would generalize to the home setting. A concurrent multiple baseline design across participants was used to in this study.

Results indicated that (a) parent training was functionally related to increases in parental error corrections following child reading errors as well as increases in parent-delivered praise statements following correct responding and (b) effects of parent training generalized to the home setting for two of the three participants. Implications of results of this study as well as directions for future research will be discussed.

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CHAPTER I

INTRODUCTION AND LITERATURE REVIEW

One of the greatest challenges faced by educators, students, and parents alike is ensuring children have acquired basic reading skills by the end of grade three (Good, Simmons, & Smith, 1998). Learning to read is critical for success, yet many children struggle with this skill (National Reading Panel, 2000). Data from the National Assessment of Educational Progress (NAEP) indicate that 36% of fourth graders have not developed a basic level of proficiency in reading (Daane, Campbell, Grigg, Goodman, & Oranje, 2005). Longitudinal studies have shown that students exhibiting poor reading skills early in school are likely to have poor reading skills later in life (Good et al., 1998).

Recent legislation (i.e., the Individuals with Disabilities Education Improvement Act [IDEA] of 2004 and the No Child Left Behind Act [NCLB] of 2001) has been adopted in an attempt to ensure all children acquire basic reading skills. For the first time, based on IDEA, federal special education dollars are available for early intervention and prevention services that promote the success of *all* students and minimize the likelihood that students at-risk for learning difficulties will require special education (Simonsen et al., 2010). At the same time, NCLB has increased educator's responsibility for the adequate yearly progress of all students. A fundamental assumption of NCLB is that *all* students will be proficient in basic academic skills (i.e., reading and math) by the academic year 2013-2014 (Tilly, 2008). In order for this to happen, schools likely will need to shift to a model in which instruction is systematically varied based on student need, a practice that before NCLB was not the norm.

Reading is a critical skill, and in an effort to meet the needs of all students, schools increasingly are adopting comprehensive systems for reading intervention. These systems include (a) instruction that incorporates essential design elements that have been demonstrated to enhance student outcomes, (b) multi-tiered prevention models that include components such as data-based decision making, a continuum of supports, and on-going professional development, (c) cost-effective peer-mediated interventions to improve reading outcomes, and (d) parent involvement to improve student academic performance. Although there may be a variety of ways to improve academic outcomes for students, this literature review will focus on the components just listed. These features are described below.

Instructional Design Principles

According to Coyne, Kame'enui, and Simmons (2001), the design of reading instruction should be organized around six principles: big ideas, mediated scaffolding, conspicuous strategies, strategic integration, primed background knowledge, and judicious review. Each of these elements of design are described below.

Big ideas in reading. Evidence-based reading interventions should target the “big ideas” in reading. Big ideas are the fundamental concepts and principles that facilitate the acquisition of knowledge within an academic area (Carnine, 1994). The big ideas in reading include phonemic awareness, alphabetic understanding, accuracy and fluency, vocabulary, and comprehension (Adams, 1990; National Reading Panel, 2000). These big ideas highlight the necessary and important components of beginning reading. Instruction that is organized around these concepts allows for effective and efficient use

of instructional time, something that is critical to the success of students who are behind their grade-level peers (Coyne, Kame'enui, & Simmons, 2001).

Phonemic awareness. Phonological awareness refers to the understanding that language is composed of individual sounds (Coyne et al., 2001). An important skill that falls under the umbrella of phonological awareness is phonemic awareness. Phonemic awareness is the ability to manipulate individual sounds, or phonemes (Adams, 1990). There are two critical clusters of skills within phonological awareness: synthesis and analysis (Torgesen, Wagner, & Rashotte, 1994). Synthesis involves orally blending individual sounds together to make a word (e.g., /c/-/aaaa/-/t/ makes the word *cat*). Analysis is the opposite of synthesis in that it involves orally segmenting words into their individual sounds (e.g., the sounds in the word *cat* are /c/-/aaaa/-/t/). Blending and segmenting words at the phoneme level are required skills for learning how to read (National Reading Panel, 2000).

Research has suggested that phonological awareness is a key component in the acquisition of beginning reading skills (Smith, Simmons, & Kame'enui, 1998). Students with phonological deficits typically exhibit difficulties with print-related decoding of words which severely limits their (a) ability to read increasingly complex texts, (b) exposure to new vocabulary, and (c) development of reading comprehension (Savage & Frederickson, 2006). Perhaps unsurprisingly then, research has shown that children with strong phonological awareness skills typically have less trouble learning to read than do children with phonological awareness deficits (Juel, 1988; Torgesen et al., 1994).

Alphabetic understanding. Alphabetic understanding, also commonly referred to as the alphabetic principle, is the next step after phonological awareness in that it

involves the establishment of the link between a sound and the actual letter the sound represents (e.g., an understanding that the letter *a* is the symbol for the sound /a/). Put more eloquently, Adams (1990) stated, “Very early in the course of instruction, one wants the students to understand that all twenty-six of those strange little symbols that comprise the alphabet are worth learning and discriminating one from the other because each stands for one of the sounds that occur in spoken words” (p. 245). According to Perfetti (1985), “acquisition of the alphabetic code is a critical component...of reading in an alphabetic language” (p. 501).

Instruction aimed at teaching the alphabetic principle involves supporting children to (a) translate the letters in words into their phonological counterparts, (b) remember the correct sequence of sounds after translation, (c) blend the sounds together, and (d) retrieve from memory the word that matches the string of sounds just identified (Coyne et al., 2001). Once children become fluent with the alphabetic principle for common sounds, instruction becomes more advanced and the task of recognizing complex letter patterns and combinations (e.g., /ea/, r-controlled vowels) can be introduced. Research has suggested that mastery of the alphabetic principle and strong word-recognition skills are pre-requisites to reading comprehension and other higher-order reading activities (Chard, Simmons, & Kame’enui, 1998). Additionally, there is evidence to support the inclusion of instruction in alphabetic understanding to improve the reading skills of children with learning disabilities (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998; Torgesen et al., 1999).

Accuracy and fluency with connected text. Accuracy and fluency with connected text is important for beginning readers to master. Once these skills are

mastered, the cognitive resources that would otherwise be used decoding can be used to process meaning. Research has indicated that there is a strong relation between reading fluency and reading comprehension (Shinn & Good, 1992). If a reader is allocating the majority of cognitive resources to trying to figure out what the words on a page are, the reader is consequently spending less time concentrating on what the words actually mean (Stanovich, 1994).

There are several instructional strategies that can be used to increase beginning readers' accuracy and fluency including (a) having children complete repeated readings of familiar text (Harn & Chard, 2008; National Reading Panel, 2000), (b) having children read material that contains familiar, decodable words that allow them to practice decoding and blending skills (Coyne et al., 2001), and (c) establishing a reading goal and providing corrective feedback (Harn & Chard, 2008).

Vocabulary. Vocabulary is the knowledge of words and word meanings (Diamond & Gutlohn, 2006). There are two types of vocabulary knowledge: expressive and receptive. Expressive vocabulary is the ability to express ideas in speaking and in writing. Receptive vocabulary is the ability to receive information through listening and reading. Explicit vocabulary instruction is necessary for beginning readers who have limited decoding skills, and therefore do not have as many opportunities for building their vocabularies through receptive vocabulary exercises as established readers (Carnine, Silbert, Kame'enui, & Tarver, 2004).

Effective vocabulary instruction typically involves teaching a few words at a time and systematically introducing new concepts while judiciously reviewing those that have been mastered (Carnine et al., 2004). Some strategies that have been found to be

effective for teaching new vocabulary include verbal modeling, use of synonyms, and use of definitions (Carnine et al., 2004). Verbal modeling of new words is primarily used to teach labels for common objects, actions, and attributes. Synonyms are commonly used when teaching a new word that means the same thing as a word the student already has in his or her repertoire. Definitions are used when the student has the language skills needed to understand a longer explanation or when a concept is too complicated to be taught via modeling or synonyms (Carnine et al., 2004). According to Graves (2006), students can work to increase their vocabulary knowledge independently by (a) using context to determine the meaning of unknown words, (b) using word parts to determine the meaning of unknown words, and (c) using dictionaries and other reference tools when an unknown word is encountered.

Comprehension. Reading comprehension is the active and intentional thinking which allows a reader to derive meaning from text. Gaining meaning from text is the ultimate goal of reading, and it is a skill that many children fail to achieve (National Reading Panel, 2000). Comprehending text requires an understanding of vocabulary, the ability to recognize and recall specific details, the ability to draw conclusions and make inferences, and the ability to predict outcomes (Sencibaugh, 2007).

Studies conducted over the past 30 years suggest that inadequate time and attention to comprehension instruction is a leading cause of failure to master this skill (Carnine et al., 2004). Effective comprehension instruction includes the teaching of specific strategies through (a) explicit teaching of comprehension strategies with clear explanations, modeling, and providing opportunities to practice, (b) explicit teaching of how to use multiple comprehension strategies at once (e.g., paraphrasing what has been

read, predicting what will happen next; Joseph, 2008), (c) explicit teaching on how to apply different strategies with a variety of text types (e.g., teaching students to question the text and develop their own inferences and predictions prior to reading, paraphrasing the text as they read and answering the questions they derived prior to reading; Joseph, 2008), and (d) generalization of strategies into a variety of content areas (Carnine et al., 2004).

According to the National Reading Panel (2000), the big ideas in reading just described are fundamental for teaching beginning reading. In addition to the big ideas, effective reading instruction may be strategically designed to include elements that have been demonstrated to be effective in teaching beginning reading. These elements are described next.

Mediated scaffolding. Students who are at risk for reading failure may benefit from instruction that is intensive, systematic, and sustained (National Reading Panel, 2000). Mediated scaffolding is one element that may contribute to effective instruction for these students. Mediated scaffolding refers to the guidance, assistance, and support that is provided by teachers, materials, or tasks during the initial phases of beginning reading instruction (Coyne et al., 2001). Scaffolds are adjusted to meet the needs of individual students and are systematically removed as a concept is mastered. The purpose of providing scaffolding during beginning reading instruction is to assist the student as new skills are introduced, but to fade assistance over time such that the student can eventually apply the new skills independently (Carnine et al., 2004). Instruction that incorporates careful use of scaffolding moves from teacher-directed to student-directed learning and application of new skills. For example, when a new concept is introduced

teacher modeling and assistance should be provided at a greater intensity than after the concept is mastered (Coyne et al., 2001).

Conspicuous strategies. Students who are at risk for reading failure may benefit from effective strategies that allow them to use the skills associated with the big ideas of reading (Coyne et al., 2001). Strategies are a series of steps that are followed in order to solve a problem or achieve an outcome (Coyne et al., 2001). Joseph (2008) describes two commonly taught comprehension strategies: making predictions about the content of text before reading and paraphrasing text as it is read. These strategies have been demonstrated to improve student reading comprehension, however, many students are not able to master the use of these strategies without explicit instruction (National Reading Council, 1998). Strategies such as these require direct, explicit instruction for students to understand and be able to use them.

Strategic integration. Strategic integration refers to the purposeful, systematic combining of related information that results in meaningful, complex understanding of a concept (Coyne, et al., 2001). For example, strategic integration within reading instruction might involve the systematic introduction and mastery of one set of reading skills before the introduction of more complex skills. The purpose of strategic integration is to introduce skills that are considered prerequisite skills before introducing more complex skills (Coyne et al., 2001). For example, learning letter-sound correspondence is considered a prerequisite skill to reading words, therefore the skill of knowing the sound for each letter should be taught and mastered prior to introduction of word reading. That being said, it is not the case that the big ideas of reading should be introduced in isolation. Instead, the big ideas should be integrated such that content strategically

overlaps, which is likely to result in the greatest student gains (Coyne et al., 2001). For example, there is evidence to suggest that combining instruction in phonological awareness (e.g., identifying the first sound in the word *cat*) with alphabetic principle instruction (e.g. point to the letter that makes the sound /c/) can enhance student learning (National Reading Panel, 2000).

Primed background knowledge. The general knowledge that students bring to new learning experiences that is a result of pre-teaching and/or previous experiences is known as prior knowledge (Carnine et al., 2004). Tapping into or “priming” this knowledge prior to the introduction of new content is one method that has been demonstrated to be effective for enhancing student performance (Carnine et al., 2004). According to Coyne et al. (2001), the successful acquisition of new content largely depends on (a) the prior knowledge a student brings to a new task, (b) the accuracy of that prior knowledge, and (c) the degree to which the student can successfully access and use that knowledge. Strategically prompting students to think about previous knowledge (i.e., priming the student) may help them successfully learn new content. For example, if a student is about to complete a spelling exercise, the instructor may prime the students’ background knowledge of how to spell by providing a prompt to (a) sound each word out, (b) write the letter for each sound, and (c) check the final spelling by looking at the word and sounding it out to determine if the sounds written go together to make the desired word. The purpose of priming background knowledge is to increase the likelihood that students will be successful by providing them with advanced warning of the skills that will be required to complete a task (Kame’enui & Carnine, 1998).

Judicious review. Successful instruction typically incorporates a review process that reinforces previously learned information. Simple repetition is not enough to ensure the retention and understanding of information for students who are at risk for reading failure. Instead, review must be designed judiciously by monitoring student performance and including information in the review process that actually needs to be reviewed (Coyne et al., 2001). As outlined by Kame'enui and Carnine (1998), the critical dimensions of judicious review are that it is (a) sufficient to enable the student to perform the task without hesitation, (b) distributed over time, (c) cumulative, and (d) varied to enhance student ability to apply information in a variety of ways. For example, when the new sound /ea/ is introduced, it should be: (a) practiced daily until the student can produce the sound without hesitation, (b) practiced with other sounds (e.g., flashcards of a variety of sounds that have been mastered), and (c) practiced in the context of a variety of words (e.g., meat, seat, treat).

There is a substantial body of research and knowledge available about the necessary components of reading instruction and intervention for children who struggle with learning to read (Carnine et al., 2004; Joseph, 2008; Kaminski, Cummings, Powell-Smith, & Good, 2008; National Reading Panel, 2000). Beginning reading instruction that includes strategies to teach phonological awareness, alphabetic understanding, accuracy and fluency with connected text, comprehension, and vocabulary has been demonstrated to be effective with children who struggle with learning to read (Kaminiski et al., 2008; National Reading Panel, 2000;). Additionally, instruction that is strategically designed to include the elements described above (e.g., mediated scaffolding, judicious review) has

been demonstrated to be an effective method for teaching reading to students who are at risk of reading failure (Carnine et al., 2004; Coyne et al., 2001).

Taken together, the above-described principles of effective instructional design may be key to the delivery of effective reading instruction for students who struggle to acquire basic reading skills. Unfortunately, simply using evidence-based reading interventions that explicitly teach the big ideas in reading, and providing instruction that is designed to include the elements of effective instruction will not, in and of itself, result in all children learning to read. What is needed to support all students is a framework to guide implementation of effective instructional design in a manner that will differentiate instruction based on student need.

Multi-tiered Framework for Response to Intervention

Multi-tiered models of service delivery involve the implementation and evaluation of primary, secondary, and tertiary interventions to meet the needs of all students. Each of the three tiers of the model represents the level of support that is necessary for students to be successful (Tilly, 2008), with tier I being the least intensive level of support and tier III being the most intensive support. This three-tiered model has been applied to a variety of curricular areas including reading, math, and social behavior (e.g., Gresham, 2005; Sugai & Horner, 2002; Sugai & Horner, 2005; Sugai, Horner, McIntosh, 2008; VanDerHeyden, Witt, & Gilbertson, 2007; Wanzek & Vaughn, 2007). Within the area of literacy, which is the focus of this research review, scientifically supported instructional methods are implemented at varying degrees of intensity at each tier of the multi-tiered model to increase the likelihood that students will respond favorably to instruction (Gresham, VanDerHeyden, & Witt, 2005). In addition, student

response to these interventions is systematically monitored to varying degrees across the tiers with the most intensive and frequent progress monitoring occurring at tier III. The multi-tiered model is unique and different from traditional methods used in schools in that it sets up a framework for schools to provide support for *all* students as opposed to only those students identified as having a learning or behavioral disability.

In a multi-tiered system, resource allocation occurs in direct proportion to student needs. For example, a majority of students will develop proficiency in reading simply by receiving the general education instruction, or tier I level of supports. Some students will require general education instruction (i.e., tier I) plus additional support, or tier II level of support. Finally, a small proportion of students will require intensive instructional intervention, or tier III support, in addition to the tier I and II supports (Simonsen et al., 2010; Sugai & Horner, 2005). Response-to-intervention (RTI) is the basis for making decisions about student progress and performance at all tiers of a multi-tiered model of academic support (Gresham, 2008). Response-to-intervention refers to the change (or lack thereof) in performance as a function of intervention (Gresham, 2002). A student's responsiveness to intervention is measured through frequent progress monitoring of the behavior(s) of interest (e.g., oral reading fluency, correct letter sounds per minute) and, based on student responsiveness, decisions are made about (a) the level of supports and (b) the specific intervention required for the student to be successful.

Tier I. Within a multi-tiered model of academic supports tier I, or the primary level of prevention, is comprised of three main elements (a) a core reading program, (b) progress monitoring, and (c) ongoing professional development (Good, Kame'enui, Simmons, & Chard, 2002). The core reading program should be grounded in

scientifically based reading research and should address the critical elements in reading instruction: phonemic awareness, alphabetic principle, accuracy and fluency, vocabulary, and comprehension. In addition to addressing the big ideas, reading instruction at all of the tiers should incorporate the design elements previously described (e.g., scaffolding, judicious review) to a certain degree to increase the likelihood that all students acquire the skills necessary to be successful readers.

At tier I, progress monitoring of all students should occur at least three times per year (fall, winter, and spring). The data collected through progress monitoring can be used to determine which students are making adequate progress (i.e., responding to intervention) with tier I support, and which students require additional support. For the purposes of this literature review, adequate progress refers to progress that, if it continues at the same rate, results in a student meeting a predetermined goal. For example, if a second grade student earns an oral reading fluency score of 65 correct words per minute on the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2003) winter benchmark, the goal for that student is to earn a score of 90 correct words per minute by the end of the year as that is the DIBELS end of year goal for second grade students. This would be an increase of 25 correct words per minute by the end of the year. If there are 12 weeks of school left, then adequate progress would be an increase of approximately two correct words per minute each week until the end of the school year. This is calculated by determining the difference between the student's current performance (65 correct words per minute) and the expected performance (90 correct words per minute) and dividing by the number of weeks remaining (12 weeks).

In addition to the progress monitoring data that should be collected to determine student progress, data can also be used to determine functionality of the core curriculum and whether the curriculum is being implemented with fidelity to meet the instructional needs of most students (Batsche et al., 2006). For example, if the data indicate that the majority of students are not making adequate progress in oral reading fluency, this may be an indication that the core reading program is not meeting the needs of the students.

At tier I, on-going professional development should be provided to all teachers to ensure that they have the necessary skills to implement the core curriculum with fidelity. Specifically, teachers should be taught the critical elements of reading instruction (e.g., phonemic awareness, alphabetic principle), modifiable features of instruction, (e.g., scaffolding, strategic review) how to progress monitor, and how to use the data to make instructional decisions (e.g., grouping) (Good et al., 2002).

Tier II. Tier II, or the secondary level of prevention, is the supplemental programming that is provided to address the needs of students who are not making adequate progress with the core reading instruction. The purpose of tier II intervention is to remediate current skill deficits and provide students' with the skills necessary to benefit from tier I support alone (i.e., no longer require tier II supports), as well as to prevent students from eventually needing intensive, tier III intervention.

Tier II intervention typically involves providing students with additional small group instruction (3-5 students) that addresses their specific needs (e.g., additional instruction targeting decoding skills) and more frequent progress monitoring than occurs for students receiving only tier I support. Progress monitoring at tier II usually occurs at least monthly and often every other week. Progress monitoring data are typically

collected through the use of curriculum-based measures (CBM). Curriculum-based measures are short-duration (i.e. 1-5 min), standardized tests that are used to evaluate the effects of instructional interventions (Shinn, 2008). For example, a frequently used CBM measure is DIBELS, which can be used to determine whether a student is responding to the tier II intervention. Students who are responding to tier II supports either continue with this level of support, or may no longer require this level of support. Students who fail to respond to initial tier II efforts should either receive modifications to the current intervention, a different tier II intervention may be implemented, or the student may begin to receive tier III support. On-going professional development should be provided to all teachers to ensure that they have the necessary skills to implement the intervention(s) with fidelity.

Tier III. Tier III, or the tertiary level of intervention, is designed for students who have not made adequate progress when provided with primary and secondary intervention (Good et al., 2002). This tier provides students with intensive, individualized instructional interventions that are designed to increase the rate of progress (Batsche et al., 2006). Instruction at this level is typically intensified by increasing the total reading instruction provided each day, providing more explicit instruction targeting specific skill deficits, and smaller intervention group sizes. In addition to the intensified instruction, student progress is monitored even more frequently (e.g., daily, weekly) with the same type of CBMs as previously described. Data collected can be used to determine whether the student is responding to the intensified, tier III supports. If the student is responding, this level of support should continue until the student makes adequate progress and the support can be scaled back. If the student is not responding to this level

of support, additional modifications to the intervention may need to be made until an appropriate intervention is identified. On-going professional development should be provided to all teachers to ensure that they have the necessary skills to implement the intervention(s) with fidelity.

As mentioned in the description of multi-tiered models, an important aspect of implementing a multi-tiered model of support is selecting and implementing evidence-based interventions at each tier. Below is a description of peer tutoring, an evidence-based intervention that is commonly implemented as a tier II intervention or as a supplement to tier II intervention.

Peer Tutoring to Improve Reading Outcomes

Peer tutoring is a resource efficient procedure that has been demonstrated to improve the reading outcomes of students from elementary to high school (Dufrene, Reisener, Olmi, Zoder-Martell, McNutt, & Horn, 2010). Peer tutoring involves creating student dyads or small learning groups that work on instructional tasks. Peer tutoring interventions can be an ideal supplement to tier II intervention because they (a) are evidence-based, (b) can be implemented with relative ease, (c) do not require a lot of teacher time to directly implement, and (d) provide students with increased opportunities to practice skills and receive feedback (McMaster, Fuchs, & Fuchs, 2006).

There is a substantial body of research evaluating effects of peer tutoring on reading outcomes (Dufrene, Henington, & Townsend, 2006; Fuchs, Fuchs, & Kazdan, 1999; Fuchs, Fuchs, Mathes, & Simmons, 1997; Salend & Nowak, 1988; Yurick, Robinson, Cartledge, Lo, & Evans, 2006). Some of the methods evaluated in the literature include Listening Passage Preview (LPP; Salend & Nowak, 1988; Wright &

Cleary, 2006), Repeated Reading (RR; Yurick et al., 2006), and Peer Assisted Learning Strategies (PALS; Fuchs et al., 1997; Fuchs et al., 1999). A few studies evaluating the effectiveness of these methods to improve student reading outcomes are described below.

Listening Passage Preview (LPP) is an evidence-based procedure that involves one individual reading a passage aloud while another individual silently follows along. In the case of peer-mediated LPP, the individual reading aloud and the listener are both students. In a study conducted by Wright and Cleary (2006), 14 second-grade and 13 third-grade students were paired with a tutor who was in third or fourth grade. Prior to the start of tutoring, students who were the recipients of tutoring read at a mean fluency rate of 52 words per minute (range = 44 – 55) at their instructional level. By the end of the study, students who were the recipients of tutoring read at a mean fluency rate of 70 words per minute (range = 63 – 75) at their instructional level. The average number of weeks in which the peer tutoring intervention occurred for each pair was 19.2 (range = 8.6 - 21.2). The effect size was calculated using the standardized difference approach (Faith, Allison, & Gorman, 1996) in which the mean of the baseline phase was subtracted from the mean of the treatment phase for each participant. The difference was then divided by the standard deviation of data values in baseline. The mean effect size for students who received tutoring was 1.81 (range = -2.3 – 6.3).

Repeated Reading (RR) is another evidence-based procedure that has been linked to increased reading performance. The RR method involves setting a fluency criterion (e.g., 110 correct words per minute with 0-2 errors) and having the student reread a passage until the fluency criterion is achieved. In a study conducted by Yurick and colleagues (2006), a multiple baseline design across participants was used to demonstrate

effects of peer-mediated RR on oral reading fluency and comprehension for eight fifth-grade students. All participants were exposed to two conditions, sustained silent reading and RR. The sustained silent reading condition was designed to represent an independent reading activity commonly found in elementary classrooms. During this condition, students were given a fourth-grade level passage of approximately 200 words and asked to read silently for 10 minutes. After 10 minutes, students were timed for 1 minute to determine words read correctly per minute and then asked to orally answer five questions about the passage. During the RR condition, students were paired up and given a fourth-grade level passage of approximately 200 words. Students alternated reading paragraphs from the passage for 10 minutes. If a student made an error, the partner performed a three-step correction procedure that involved (a) stopping the student and having him sound out the word missed, (b) having the student repeat the group of three words that consisted of the error and the words directly before and after it, and (c) having the student repeat the group of words three times fast *or* saying the group of words backward and forward. After 10 minutes, students were timed for 1 minute by the classroom teacher to determine words read correctly per minute. Results of this study demonstrated an increase in all participants oral reading rate and accuracy following implementation of the RR intervention with a mean increase of 68 words read correctly per minute across participants.

Peer assisted learning strategies (PALS) is a resource-efficient method that can be used to increase reading performance. This method involves pairing high-performing and low-performing readers to complete a series of activities designed to promote reading fluency and comprehension. Students are trained to use specific prompts, corrections,

and feedback to assist the assigned partner. Both students complete the activities during each PALS session with the high-performing student always completing the activity first to provide a model for the lower-performing peer (McMaster et al., 2006).

In a large-scale experimental field study conducted by Fuchs and colleagues (1997), 12 schools were randomly selected to either implement PALS or serve as a no-treatment control. The PALS intervention was implemented for 15 weeks in 20 classrooms while 20 other classrooms continued with their regular reading program. At the beginning of the study, the PALS classrooms and control classrooms did not differ significantly in terms of student reading achievement. By the end of the study, students in the PALS classrooms significantly outperformed students in the control classrooms on the Comprehensive Reading Assessment Battery (CRAB; Fuchs et al., 1989), a measure of reading fluency and comprehension.

Peer tutoring has been demonstrated to be an effective way to improve reading outcomes for a variety of students. Implementation of a peer tutoring intervention is relatively resource efficient given that students are abundant in schools, making it an ideal intervention to incorporate into a multi-tiered model of support. Given the limited financial resources of many schools and the increasing needs of many students, the need for more resource efficient intervention strategies for improving student reading outcomes is great.

Another resource efficient intervention that could be incorporated into a multi-tiered model of support as a supplement to tier I or tier II efforts is active parent involvement. Parent-directed academic interventions can provide opportunities to extend the learning environment beyond the school walls and academic calendar (Christenson &

Sheridan, 2001), which could potentially result in improved reading outcomes for students who struggle to meet critical literacy benchmarks. The literature on parental involvement in reading interventions is described below.

Parent Involvement in Child Acquisition of Reading Skills

The literacy experiences of children can be positively affected when parents provide academic support (Fiala & Sheridan, 2003). It stands to reason that parents who are able to read at a minimum of a fourth grade level, speak fluent English, and who have time available to devote to reading intervention at home would be ideal candidates to implement a parent-led reading intervention. Providing parents with skills that are effective for increasing child reading outcomes may increase the likelihood of parental involvement in reading intervention efforts. Additionally, providing parents with these skills may effectively make the act of completing reading assignments at home less aversive to both parents and children as parents will have a greater understanding of their role. Not all of the studies described below include parental characteristics and demographic information, so parents for whom parental involvement in reading intervention is most appropriate cannot be determined at this time.

Research on parent involvement in student academics has focused primarily on parent tutoring (e.g., Cadieux & Boudreault, 2005; Fiala & Sheridan, 2003; Gortmaker, Daly, McCurdy, Persampieri & Hergenrader, 2007; Love & Van Biervliet, 1984; Miller & Kratochwill, 1996; Resetar, Noell, & Pellegrin, 2006; Thurston & Dasta, 1990). Parent tutoring studies have taught parents to use a variety of approaches to improve student reading performance including paired reading (Fiala & Sheridan, 2003; Cadieux & Boudreault, 2005; Miller & Kratochwill, 1996); pause, prompt and praise (Love & Van

Biervliet, 1984; Thurston & Dasta, 1990); and strategies for improving reading fluency (Gortmaker et al., 2007; Resetar et al., 2006). Studies evaluating the effectiveness of parent tutoring to improve student reading performance are described below.

The paired reading approach is one type of parent tutoring that can be found in the literature (Fiala & Sheridan, 2003; Cadieux & Boudreault, 2005; Miller & Kratochwill, 1996). The paired reading approach teaches parents to read simultaneously with their child, and to provide support when the child is reading independently (Toomey, 1993). The paired reading approach has two phases, a simultaneous reading phase and an independent reading phase (Cadieux & Boudreault, 2005). During the simultaneous reading phase, the parent and child read together with the parent setting the pace and modeling appropriate expression and intonation. During this phase, the child at some point provides a predetermined signal to the parent, which tells the parent to stop reading and the independent reading phase begins. When the child makes an error, the parent stops the child, models the correct reading of the word, and then simultaneous reading resumes until the child gives the signal again (Topping, 1995).

Of the three studies cited in this literature review that have empirically evaluated paired reading, two reported positive outcomes, Fiala and Sheridan, (2003) and Cadieux and Boudreault, (2005). Fiala and Sheridan conducted a study in which the effectiveness of a paired reading intervention on oral reading fluency was examined with three students in third and fourth grade using a multiple baseline design across participants. All participants were from a dual parent household, all parents were in their mid-thirties, and all parents worked outside of the home. Participants used the paired reading method for 10 minutes a day, 4 times per week. The length of the intervention for each participant

varied (6 weeks, 5 weeks, and 3.5 weeks). Positive effects sizes were found for all participants using the standardized difference approach described above (range of .652 to 2.038) and the words read correct per minute for all participants increased from baseline to follow-up. Additionally, parents and students gave favorable treatment acceptability ratings for the paired reading intervention. Treatment integrity was assessed in this study by having the parent-child dyads audio record paired reading sessions at home. Rates of treatment integrity averaged between 89 and 97% throughout the course of the study. The researchers determined treatment integrity by listening to the audio recordings of home sessions and completing a checklist that included each step of the paired reading intervention. Although this approach provides important information about overall treatment integrity, it does not provide specific direct observation data on parent behavior before and after the intervention. Moreover, parents were not taught specific methods for addressing child errors.

Another study evaluating the paired reading approach that reported positive outcomes was conducted by Cadieux and Boudreault (2005). They used a pre-test/post-test control design to evaluate effectiveness of the intervention. In this study, the parents of 32 kindergarten students were trained in the paired reading method. Demographic information for the parents was not provided other than the socio-economic level of participants was generally low. Parents were asked to read with their child for at least 5 minutes a day, 5 days a week for 10 months in their respective homes. Results of this study indicated that the paired reading intervention resulted in statistically significant differences in scores on a phonological awareness test between children who received the intervention and the 22 children in the control group. Although home visits were

conducted once a week for each parent, fidelity of implementation data were not reported. Furthermore, this study only evaluated student scores on pre- and post-test measures rather than continuous progress monitoring with CBMs.

In contrast to the previous two studies, Miller and Kratochwill (1996) did not find significant differences in overall reading scores between the paired reading group and the control group. In this study, 24 parents were provided with training in the paired reading method and asked to read with their child 5 times a week, for 10 to 15 minutes at a time, across 8 weeks. Demographic data for the parents who participated in this study were not provided. Comparisons were made between participants in the paired reading group and an untrained control group of 26 parent/child dyads. Although parents were asked to audio record the paired reading sessions at home, the authors report that only 7 parents returned all tapes, 9 parents returned between one and seven tapes, and 8 parents returned no tapes. With this low rate of tape return, fidelity of implementation could not be assessed. And, as with the previous two studies, parents were not taught specific methods of addressing student errors during reading.

Pause, prompt, and praise is another approach to parent tutoring that can be found in the literature (Love & Van Biervliet, 1984; Thurston & Dasta, 1990). Thurston and Dasta (1990), as cited in Fitton and Gredler (1996), evaluated effects of the pause prompt praise approach by training a group of parents to (a) use delayed correction when the child makes an error, (b) model the correct reading of a missed word, and (c) provide encouragement and praise throughout the reading session. It was reported that the parents who were trained in the pause prompt praise method read more often to their children and used fewer punishing statements and more praise statements than parents in

the control group. In addition, the children whose parents received this training scored higher on a test of oral reading than the children in the control group. These results indicate that the parents who received the pause prompt praise training were able to learn specific and effective methods of reading with their children. However, this study does not provide data on fidelity of parent implementation of the pause prompt praise methods. Moreover, this intervention was not directly linked to an evidence-based reading intervention and it is unclear if the big ideas in reading were targeted.

Other methods of parent tutoring that can be found in the literature include teaching specific methods for increasing reading fluency (Gortmaker et al., 2007; Resetar et al., 2006). Two of these studies are described below.

Gortmaker, Daly, McCurdy, Persampieri and Hergenrader (2007) used a multiple probe design across tasks to evaluate effects of a summer parent tutoring program on the generalization of reading skills from high-word-overlap reading passages to low-word-overlap reading passages. Three parents of three third grade children were taught to implement an individualized reading intervention with their respective child. No demographic information was provided about parents in this study. Parents were taught specific methods for having their child complete repeated readings as well as how to correct child errors made during reading. Although the authors state that parents were taught to correct child reading errors, the error correction methods taught were not specified. Results demonstrated generalized increases in reading fluency in both high-word-overlap and low-word-overlap as a function of parent tutoring. In addition, 60% of the home sessions were audio recorded and treatment integrity of parent implementation was 89% (range = 60% to 100%). These results provide support for the utility of parent

training to increase student reading skills, as well as evidence that parents can be taught specific methods and implement those methods with fidelity. Although promising, this study does not provide direct observation data on effects of parent training on actual parent behavior. Specifically, it is unclear how parent behavior (e.g., error corrections, praise statements) changed following the parent training intervention.

Another parent tutoring study targeting fluency was conducted by Resetar, Noell, and Pellegrin (2006). In this study, a multiple baseline across participants was used to evaluate effects of a parent tutoring intervention on oral reading fluency for five first grade students. No demographic information for parent participants was provided. The intervention delivered by the parents in the home consisted of (a) the parent reading a passage aloud to the child, (b) the child reading the passage aloud with the parent correcting errors, (c) the child reading the passage aloud again while the parent timed for 1 minute, (d) the child reading the passage again, but this time silently, and (e) the parent asking three comprehension questions. Results of this study showed that student oral reading fluency (words read correct in 1 minute) increased on tutored passages (i.e., passages that were read by the parent, read by the child once, then read by the child again to determine the correct words per minute). Although this study provides support for the use of parent tutoring to increase child oral reading fluency, it is unclear whether the parent tutoring or the repeated readings were responsible for the increase as it is not clear if repeated readings occurred during baseline sessions. Moreover, no data were provided on effects of parent training on parent behavior (e.g. rates of positive statements provided, proportion of student errors corrected during readings).

Statement of the Problem

The literature base on parental involvement in child reading interventions is relatively small. Given what we already know about the positive effects of peer tutoring on student reading outcomes, it is important to explore the possibility of involving parents in reading intervention in much the same way as peers to further increase student outcomes. Although each study on parental involvement contributes important findings in this area, there are limitations. The majority of studies have neglected to directly target the big ideas in reading (e.g., Cadieux & Boudreault, 2005; Fiala & Sheridan, 2003; Love & Van Biervliet, 1984; Miller & Kratochwill, 1996; Thurston & Dasta, 1990), incorporate evidence-based reading interventions (e.g., Cadieux & Boudreault, 2005; Fiala & Sheridan, 2003; Love & Van Biervliet, 1984; Miller & Kratochwill, 1996; Thurston & Dasta, 1990), provide direct observation data on parent fidelity of implementation (e.g., Cadieux & Boudreault, 2005; Thurston & Dasta, 1990) or provide direct observation data of changes in parent behavior following parent training (e.g., Cadieux & Boudreault, 2005; Fiala & Sheridan, 2003; Gortmaker et al., 2007; Miller & Kratochwill, 1996; Resetar et al., 2006; Thurston & Dasta, 1990). Taken together, although these studies tentatively suggest parental involvement results in enhanced reading performance, effects of parent training that directly supplements an evidence-based reading intervention on parent and child behavior are unknown. Additionally, there is a substantial literature base suggesting that reading instruction targeting the big ideas in reading and incorporating evidence-based elements of effective instruction will lead to improved reading outcomes for children, however, it is unclear whether additional benefits can be accrued if parents deliver such reading instruction.

The proposed study will address these gaps in the literature by evaluating effects of a parent training program designed to target individual student reading deficits. This program will be specifically designed for parents of students receiving supplemental evidence-based, small-group reading intervention in a clinic setting. The purpose of this parent training will be to provide parents with the skills necessary to work with and enhance the skills their child learns during the small-group reading intervention.

Specifically, this study will address two research questions: First, is there a functional relation between the implementation of a parent training intervention and parent's correct implementation of an error correction procedure and delivery of praise statements? Second, can parental behavior change observed in a clinic setting generalize to the home setting?

CHAPTER II

METHODS

Setting and Participants

Setting. This study took place at the Center on Teaching and Learning (CTL) Reading Clinic on the campus of the University of Oregon during 8 weeks of the summer of 2010. The CTL Reading Clinic is a non-profit program dedicated to the prevention and remediation of reading difficulties in school-age children. The majority of students served at the clinic are referred by teachers who in turn have learned about the clinic through the dissemination of fliers to schools advertising clinic services. The clinic assists students in grades K-9 who are experiencing reading difficulty by providing individualized assessment and intensive, research-based intervention. The CTL Reading clinic served 52 students in grades kindergarten through seven during the summer of 2010 with 65% identifying as White, 13% identifying as Hispanic, 4% identifying as Asian, 10% identifying as African American, and 8% unspecified. During the 2010 summer session, 40% of students were eligible for free or reduced cost of attendance at the clinic, which was based on their free and reduced lunch status at school.

All experimental phases of this study occurred at the CTL Reading Clinic at the University of Oregon. All sessions were conducted in individual therapy rooms (approximately 3 m by 3 m) for all participants. The rooms contained a square table, two to three chairs, a metal cabinet containing supplies (e.g., hand sanitizer, pencils, paper), and a video camera mounted on the wall. Generalization sessions were conducted in participants' homes.

Participants. To be eligible for this study, potential participants were recruited from a pool of all applicants to the CTL Reading Clinic in the summer of 2010. There were three eligibility criteria, children had to be (a) entering second grade during the 2010-2011 academic school year, (b) exhibiting problems with reading performance as indicated by DIBELS (Good & Kaminski, 2003) and (c) available to attend an 8-week reading intervention if selected to participate. Reading difficulties were assessed as part of the standard CTL Reading Clinic intake assessment conducted by clinic staff at the clinic in early June of 2010. The intake assessment took approximately 20-min to administer and included the first grade spring Dynamic Indicators of Basic Early Literacy Skills benchmark assessment (DIBELS; Good & Kaminski, 2003) and the *Read Well I* program placement test. Children's scores on the DIBELS benchmark measures are categorized as in the benchmark, strategic, or intensive range of risk. Students who score in the benchmark range are described as being on target for meeting grade-level proficiency; students who score in the strategic range are described as falling behind and in need of additional instruction to reach benchmark (e.g., more instruction than what is currently being provided); and students who score in the intensive range are described as far behind expected performance and in need of consistent small-group remedial instruction to catch up to benchmark level (Kamps, Abbott, Greenwood, Wills, Veerkamp, & Kaufman, 2008). Students whose benchmark scores fell within the intensive range were eligible to participate in the study. If, based on DIBELS scores, students met criteria to receive services at the CTL Reading Clinic, the *Read Well I* placement test was administered to determine where they should be placed in the reading intervention program.

Informed consent to participate in this study was obtained from the parents of all participants and the child participants provided assent after the intake assessment was completed. Any child who qualified to receive services at the CTL reading clinic and met the criteria for participation as described above was eligible to participate in the study. The investigator was responsible for contacting parents of students who qualified to receive services at the CTL Reading Clinic to review the results of the intake assessment and provide details of the study.

It is important to note that there were originally four participants who qualified to participate in this study. One of the participants dropped out prior to the start of the study due to a scheduling conflict that arose following the initial intake assessment. This child did not participate in the CTL Reading Clinic at all. Another participant dropped out of the study after attending the CTL Reading Clinic for a week and a half due to scheduling conflicts. This participant did not participate in the CTL Reading Clinic at all after the first week and a half. Following the loss of this second participant, another participant was recruited to participate in the study. This participant, Tim, was already attending the CTL Reading Clinic and met the criteria for participation in the study. Tim did not officially join the study (i.e., direct observation data were not collected) until the fourth week of the 8-week study.

Ely. Ely was an 8-year-old White male from a dual-parent household. Ely's mother was a White female who submitted the application for Ely to attend the CTL Reading Clinic summer session. The language spoken in Ely's home was English. Ely did not qualify for free or reduced attendance services at the CTL Reading Clinic based on his free and reduced lunch status at school.

Sam. Sam was a 7-year-old White male from a single-parent household. Sam's mother was a White female who submitted the application for Sam to attend the CTL Reading Clinic summer session. The language spoken in Sam's home was English. Sam did not qualify for free or reduced services at the CTL Reading Clinic based on his free and reduced lunch status at school.

Tim. Tim was a 7-year-old White male from a dual-parent household. Tim's mother was a White female who submitted the application for Tim to attend the CTL Reading Clinic summer session. The language spoken in Tim's home was English. Tim did not qualify for free or reduced services at the CTL Reading Clinic based on his free and reduced lunch status at school.

Measurement, Response Definitions, and Interobserver Agreement

Reading performance measures. The first grade spring DIBELS benchmark measures were used to measure two important early literacy indicators that are well established in the research literature on beginning reading instruction: (a) alphabetic principle and (b) accuracy and fluency with connected text. The DIBELS measures that were used included the Nonsense Word Fluency measure (NWF) and the Oral Reading Fluency measure (ORF), both of which are described below. For NWF, alternate-form reliability ranges from .67 to .87, and concurrent validity with other reading measures ranges from .35 to .55 (Kaminski & Good, 1996). Test-retest and alternate-form reliability for ORF are consistently above .90, and criterion-related validity with other standardized measures of reading, decoding, and comprehension is also high (Fuchs, Fuchs, Hosp, & Jenkins, 2001).

DIBELS Nonsense word fluency measure. The DIBELS nonsense word fluency measure is a 1 min timed, fluency-based, standardized measure of students' knowledge of the alphabetic principle. Students are presented with a sheet of paper containing consonant-vowel (cv) and consonant-vowel-consonant (cvc) nonsense words and are instructed to say the sounds of the letters, for example, /v/ /i/ /m/, or to read the whole word "vim". The nonsense words are representative of the most frequently occurring letter sounds in the English language, and every letter corresponds to its most frequently occurring sound (Carnine et al., 2004). For example, only short vowel sounds are represented and the letter "c" occurs only in the final position of a word such that it always corresponds to the /k/ sound. Providing the individual sounds of the letters or reading the whole word earns the student the same amount of points, however, the measure is fluency based and designed so that students earn a higher score for recoding letter sounds into complete words accurately and fluently. The benchmark goal for NWF is 50 correct letter sounds per minute by the middle of first grade (Good et al., 2002).

DIBELS Oral reading fluency measure. The DIBELS oral reading fluency measure is a timed, fluency-based, standardized measure of a students' ability to read connected text accurately and fluently. Students are presented with a grade-level passage and asked to read the passage out loud. The numbers of words that the student reads in 1 min are counted and an oral reading fluency score is calculated by subtracting the number of errors from the total number of words read. The benchmark goal for first grade ORF is 40 correct words per minute by the end of first grade (Good et al., 2002).

DIBELS data collection. These data were collected once a week for 8 weeks at the CTL Reading Clinic for each participant. Data collectors were provided with a 2-

hour training led by the investigator on how to collect DIBELS data for the nonsense word fluency (NWF) and oral reading fluency (ORF) measures. The training provided the data collectors with information on the administration and scoring procedures for both measures as well as practice administering and scoring each measure. Data collectors had the opportunity to practice scoring each measure while listening to recordings of children as they were administered the DIBELS measures. Prior to beginning data collection, data collectors achieved 95% interobserver agreement scores on each measure with the investigator. For the NWF measure, interobserver agreement was calculated by dividing the smaller score of letter sounds correctly per minute by the larger score of letter sounds correctly per minute. For the ORF measure, interobserver agreement was calculated by dividing the smaller score of words read correctly per minute by the larger score of words read correctly per minute.

Direct observation measures. Direct observation data were collected on child reading errors, parent use of error-correction procedures, and parent-delivered praise statements during completion of take-home assignments. Data were also collected on intervention implementation by the interventionist leading the small group. Direct observation data were collected at least three times per week during take-home assignment completion sessions at the clinic. Direct observation data were collected by the investigator and implementation assistants. Implementation assistants were graduate students in the College of Education at the University of Oregon who had completed at least one year of graduate level training including coursework in reading instruction, design of instruction, and consultation. Implementation assistants did the following: (a) assisted with parent training, (b) assisted with collection of DIBELS data, (c) observed

parent implementation of the procedures taught during training, and (d) collected fidelity of implementation data for the small reading groups.

Child reading errors. Reading errors were defined as any instance in which the child mispronounced, omitted, or substituted a different sound/word for the actual sound/word while completing a take-home task (see Appendix A for an example of a take-home task). Examples of reading errors included saying the word “the” instead of “a” or saying “where” instead of “there”, skipping the word “the” in a sentence, and saying “mom” instead of “mother”. Reading errors were coded using frequency recording.

Error correction. An error correction was defined as any instance in which the parent correctly used the 3-step error correction procedure taught during parent training in the presence and absence of a reading error. Table 1 provides a summary of the types of errors children made as well as the correct error procedure for each type of error. For example, if a child said the word *swish* instead of *swoosh* during a word reading activity, the parent should have corrected the error by saying “That word is *swoosh*, what word? Next, assuming the child then read the word correctly, the parent would have said, “Nice job.” In the event that a child made an error in responding during the error correction procedure, the parent was instructed to start the error correction procedure over from the beginning. For example, if a parent responded to an error by saying “That word is *shoot*, what word?” and the child said “*shooting*”, the parent would again say “That word is *shoot*, what word?” and complete the error correction procedure. This type of error never occurred, children always read the word correctly following an initial correction by the parent. Error corrections were coded using frequency recording.

Table 1

Error Correction Procedures by Type of Error

Type of Error	Error Correction Procedure
Regular Word Reading	“That word is <i>shoot</i> , what word?” “Nice job.”
Tricky Word Reading	“That word is <i>was</i> , what word?” “Excellent.”
Sound Combination	“That sound is /s/, what sound?” “Yes, good work.”
Words in Story	“That word is <i>swoosh</i> , what word?” “Good reading.”

Parent-delivered praise statements. Parent-delivered praise statements were defined as any instance in which the parent delivered a positive verbal statement to the child in regards to academic or behavioral performance (e.g., “Great job remembering that tricky word!” or “Nice job using your finger to track while you read!”). Parents were taught to provide praise intermittently throughout the session following correct responding. For example, if a child read a whole row of words without a mistake, the parent should have provided brief verbal praise. Similarly, if a child made an error while reading a row of words, but did not make the same error when rereading the row of words, the parent should have provided brief verbal praise acknowledging that the child did not make the same mistake twice.

Four types of praise statements were recorded: (a) general and (b) specific praise statements delivered in regards to academic performance and (c) general and (d) specific praise statements delivered in regards to social behavioral performance. General praise

statements were scored when the parent said something positive such as “Good job”, “Nice”, “Excellent” but did not specifically state what was done well (e.g., getting a difficult word correct, reading a sound correct that has historically been difficult for the child). In contrast, specific praise statements were scored when the parent said something positive *and* stated exactly what the child did that the parent liked such as “Great job getting that tough word!” or “You did a nice job of coming to the table and getting started right away!” Praise statements were coded using frequency recording.

Data collection. During direct observations, trained observers collected data on child reading errors, parent error corrections, and parent-delivered praise statements directed at the child in regards to academic performance. Observers were trained to code the occurrence of reading errors, all steps of the error corrections, and parent-delivered praise statements as defined above. These data were recorded directly on copies of the take-home assignment that the parent and child were working with during the session (see Appendix B for an example of how coding occurred).

When a child made an error, the data collector put a slash mark through the word or sound. When the parent corrected the error it was recorded in a way that indicated which of the various steps of the error correction were implemented. For example, when a child made an error while reading regular words, the parent was instructed to (a) stop the child and model the correct word, (b) have the child repeat the word, and (c) deliver a praise statement. This sequence was coded by writing the letter ‘m’ to indicate that the correct word was modeled, writing a plus sign (+) to indicate that the student repeated the word correctly, and then writing the letter ‘p’ or the letters ‘sp’ to indicate that a praise statement or a specific praise statement was delivered (Appendix B).

Observers watched and coded the parent-child sessions through the camera system from a different therapy room (i.e., observers were not present in the therapy room while the parent-child sessions were taking place).

Prior to beginning data collection, observers were trained to a 90% interobserver agreement criterion. Data collectors participated in a 2-hour training session in which they (a) became familiar with the operational definitions used during this study, (b) were taught how to code data, and (c) practiced data collection while watching video of children reading. Prior to baseline data collection, observers conducted two practice observations in a therapy room at the CTL Reading Clinic with the investigator. Occurrence agreement was at or greater than 90% on the target behaviors before the observers began collecting baseline data. If agreement fell below 90% for three consecutive sessions at any time during the study, the data collectors would have ceased collecting data and would have been retrained until the 90% criterion was achieved once more. This never happened over the course of the study.

Interobserver agreement. Interobserver agreement was assessed during at least 40% of the observation sessions within each phase. During these sessions, two observers simultaneously but independently collected data as described above. Occurrence agreement was calculated for child reading errors, parent error corrections, and parent-delivered praise statements. Occurrence agreement was calculated by dividing the total number of instances both observers agreed a response occurred during completion of the reading take-home assignment by the total number of instances either observer scored a response and multiplying by 100.

Table 2 displays occurrence agreement across participants. For child reading errors, occurrence agreement averaged .92 (range = .73 - 1.0). For parent-delivered praise, occurrence agreement averaged .86 (range = .50 – 1.0). For error corrections, occurrence agreement averaged .92 (range = .50 – 1.0).

Table 2

Average (range) Interobserver Agreement

	<i>Child Reading Errors</i>	<i>Parent-delivered Praise</i>	<i>Error Corrections</i>
Ely	.92 (.82-1.0)	.92 (.76-1.0)	.87 (.50-1.0)
Sam	.96 (.80-1.0)	.82 (.50-1.0)	.97 (.67-1.0)
Tim	.86 (.73-.90)	.83 (.67-.93)	.92 (.60-1.0)

Fidelity of implementation. To assess the fidelity with which *Read Well I* was implemented in the clinic, direct observations were conducted three times per week. Data were collected on the percentage of *Read Well I* instructional components implemented by the interventionist. Fidelity ratings for *Read Well I* (Appendix C) consisted of a checklist that was used to assess the presence or absence of key features of the intervention. To calculate the percentage for implementation fidelity, the number of points earned for each key feature was summed and divided by the total number of points possible.

Each of the three participants was in a different reading group. Table 3 displays average fidelity of implementation for each reading group across the ten components measured by the fidelity checklist. Overall fidelity was variable with an average of 87% (range = 81% - 92%). For Ely’s group, fidelity averaged 92% (range = 75% -100%). For

Sam's group, fidelity averaged 88% (range = 71% - 97%). For Tim's group, fidelity averaged 81% (range = 62% to 98%).

Taken together, these data indicate that the small group reading intervention the students were receiving was not implemented with high fidelity, which may have contributed to the students' failure to make gains on the DIBELS ORF measures used to monitor progress throughout the study.

Social validity. A 5-item questionnaire developed by the primary investigator was used to assess the social validity of the academic parent training intervention (see Appendix D). Items on the questionnaire assessed the extent to which the intervention was perceived to (a) provide parents with helpful information, (b) provided parents with an error correction procedure that was easy to use, (c) provide parents with skills that they will continue to use following the conclusion of the study, (d) improve child reading skills, and (e) be worth recommending to others. Scores on the questionnaire were recorded on a 4-point Likert scale with higher scores indicating a more favorable impression.

Table 3

Average Fidelity of Implementation Across Small Group Reading Intervention Components

Component	Ely	Sam	Tim
Lesson started on time	100%	97%	98%
Entire activity completed before moving on to next activity	96%	98%	82%
Error correction procedure used	96%	74%	73%
All students in group participated	89%	90%	92%
Good pacing and enthusiasm from instructor	100%	96%	67%
Clear signals to group from instructor	95%	92%	82%
Students were given individual turns	84%	94%	95%
Instructor uses specific praise	75%	77%	62%
Students engaged in lesson	89%	88%	88%
Behavior expectations posted and reviewed	100%	71%	67%
Overall	92%	88%	81%

Design and Procedures

Experimental design. A concurrent multiple baseline design across participants was used to evaluate whether changes in parental use of the error correction procedure and delivery of praise statements occurred as a result of the parent training intervention as

opposed to some other variable. There were two primary conditions in this study, baseline and intervention. Criteria for moving from one phase to the next was based on parental use of the error correction procedure. Measurement of the primary dependent variable, error correction, during baseline continued until the observed pattern of responding was sufficiently consistent to allow prediction of future responding. Documentation of a predictable pattern during baseline required five or more data points without an increasing trend. In intervention a minimum of three data points at or above 90% in the clinic were required before generalization probes could begin in the home.

During baseline and implementation at the clinic, parent-child dyads met in a therapy room and completed the daily take-home assignment immediately following the 1-hour small group reading intervention session 3-4 times per week. If the child indicated that he needed a break before beginning, or if the child appeared to need a break, a 15-min break would have been provided prior to completion of the take home assignment. This never happened during the study.

Baseline. This phase began the first week of the 8- week small group reading intervention that took place at the CTL Reading Clinic and lasted until a pattern of responding that was consistent enough to allow prediction of future responding was observed. At least three sessions took place each week during this phase of the study. During this and the subsequent phase, parents worked with their children in the clinic immediately after the 1-hour small group reading intervention had concluded for the day. In baseline, parents were seated at a small table with their child in a private clinic room and were instructed to have their child complete one take-home assignment that was provided by the CTL Reading Clinic. Parents were instructed to respond to their child as

they normally would when completing assignments at home (e.g., homework assignments that are typically sent home from school).

Parent training. Following baseline, parents were trained in the parent training intervention. Because a multiple baseline design was used, parents were trained individually. Parents were asked not to discuss the training with other parents. Training consisted of two 90-min sessions provided by the investigator.

Each training session consisted of two components, the first component involved training the parent while the child was receiving reading intervention in another room and the second component involved the parent working directly with their child. In the first component of training, which lasted approximately 60-min, the focus was on (a) describing the five big ideas of reading, (b) the importance of daily reading practice at home in a routine, structured environment, (c) sounds for all the letters and letter combinations that are introduced in the *Read Well I* intervention, (d) procedures for correcting sound errors and word reading errors in and out of the context of a sentence, and (e) basic behavior management strategies such as using a motivational system. This portion of training included didactic instruction, modeling, practicing, and immediate corrective feedback (see Appendix D for training materials).

The second portion of training, which lasted approximately 30-min, allowed parents time to practice newly learned skills with their child. The parent and child worked together to complete the child's take-home assignment for that day. The investigator was present in the room to provide coaching and immediate feedback to the parent on the procedures taught during training. This component of training continued until parents were using the error correction procedure with 90% or greater fidelity for two

consecutive observations. This component lasted two days for all participants (a total of 60 min per participant-dyad).

Implementation in the clinic. During this phase, parents were seated at a small table with their child in a private clinic room exactly as they were in baseline. The take-home assignment was placed on the table in front of the child and the parent led the child through the activities. Parents began each session by telling the child what they would be doing (e.g., “We are going to start with a letter sound warm-up, then we will read some words, then we will end with a short passage.”). After stating which activities would be completed, the parent read clear, concise instructions from the assignment on how to complete each component of the early literacy activities (Appendix A). Parents were taught to provide immediate corrective feedback following each student reading error as well as specific praise for correct responding (e.g., “That’s right, that word is *was*. Great job!” “Excellent remembering that tricky word *two*, it’s not tricky for you anymore!”). Parents were also taught to give points throughout the session for correct responding and effort. Points were recorded on a point sheet provided by the CTL Reading Clinic (see training manual Appendix E). Once the point sheet was filled up it was exchanged for a prize from the reading clinic treasure chest. The child participants were familiar with this system as it was also in place during the small-group reading intervention.

Implementation at home. This phase began after three consecutive sessions of parents implementing at the clinic with at least 90% fidelity (i.e., using the three-step error correction procedure to correct at least 90% of all child word reading errors). During this phase, parent-child dyads completed the daily take-home assignment at home. Parents were provided with a digital audio recording device to record their

sessions at home. Each week parents were asked to record their Monday, Tuesday, and Wednesday sessions. For example, parents were asked to bring the recording of Monday's home session to the clinic on Tuesday, the recording of Tuesday's home session on Wednesday, and the recording of Wednesday's home session on Thursday so that the data could be given to the implementation assistant and analyzed during the time that the small-group reading intervention was occurring. This allowed the implementation assistant time to score the home session and provide appropriate feedback to the parent before the parent left the clinic for the day and completed the next take home assignment at home.

Reading Intervention. All participants received instruction from the *Read Well I* curriculum (Sprick, Howard, & Fidanque, 1998) in small groups (3-5 students per group) for 1 hour a day, 4 days a week for 8 weeks. As is the case for all children receiving reading intervention services at the CTL Reading Clinic, the intervention was delivered by graduate students from the College of Education at the University of Oregon. The interventionists were trained by CTL Reading Clinic staff. This reading intervention was the standard for all first and second grade students receiving intervention at the CTL Reading Clinic and was not manipulated as part of the study.

Read Well I is a beginning reading program designed for kindergarten and first grade students as well as second and third grade students in need of intensive reading intervention. *Read Well I* is designed to provide students with the foundational skills required for reading with understanding through small group instruction that is mastery-based, flexible, and guided by ongoing individual assessment. There are 38 units and each unit includes instruction in decoding and a story reading. Each unit is thematically

based with the sounds and words taught and practiced during decoding instruction systematically linked to the unit's stories. Each unit begins with one new letter sound that is practiced during decoding instruction through word reading. After decoding instruction, skills that have been previously introduced and mastered are practiced through the reading of connected text. *Read Well I* provides a unique story format that includes duet and solo stories. Duet stories consist of interventionist-read text interspersed with fully decodable student-read text; students read the decodable parts and the interventionist reads the other parts. Duet stories provide students with exposure to rich content, new vocabulary words, and the opportunity to think critically by incorporating comprehension questions that are answered orally by students throughout. Solo stories are fully decodable and are read by the students. These stories provide students with opportunities to practice new vocabulary and to orally answer comprehension questions throughout.

Data Analysis

Visual analysis was used to examine the direct observation data. Parental implementation of the three-step error correction procedure was the primary dependent variable upon which demonstration of functional control was determined. Level, trend, variability, and the immediacy of effects were analyzed.

The proportion of child errors followed by a parental error correction was used as the primary indicator of effectiveness of the parent training. The probability that an error was followed by a correction was calculated by dividing the number of errors followed by correction by the total number of errors. Effects of parent training on the delivery of praise statements was also assessed.

In addition to effects of parent training on parent behavior, effects of parent training on DIBELS ORF scores was evaluated.

CHAPTER III

RESULTS AND DISCUSSION

Effects of academic parent training were examined on (a) parental delivery of praise statements (b) implementation of a three-step error correction procedure, (c) social validity, and (d) student reading outcomes.

Parental Delivery of Praise Statements

Parent-delivered praise was examined during two different activities, a word reading activity and a sentence reading activity. Percentages of parent-delivered praise during these two activities are presented in two separate graphs in Figure 1, praise delivered during the word reading activity is in the left panel and praise delivered during the sentence reading activity is in the right panel.

In a multiple baseline design across participants, functional control is documented when the introduction of an independent variable with one participant results in a change in the dependent variable for that participant but no change in the dependent variable for the other participants. The introduction of the independent variable and consequent change in the dependent variable must occur at different points in time in order to demonstrate functional control. As can be seen in Figure 1, functional control over parent-delivered praise statements during word reading (left panel) was not achieved. Although use of praise statements by Ely's and Sam's mothers increased systematically after introduction of the independent variable, Tim's mother did not increase use of praise following introduction of the independent variable. Turning to the right panel of Figure 1, a clear documentation of functional control of the intervention over parent use of

praise during sentence reading exists as parent use of praise statements systematically increased upon introduction of the parent training intervention.

The percentage of parent-delivered praise statements occurring after a word was read correctly for each participant is presented in the left panel of Figure 1, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. In baseline, praise was delivered following the correct reading of a word infrequently by all parent participants. Ely's mother delivered praise after an average of 6% (range= 0%-23%) of words read correctly, Sam's mother after an average of 13% (range = 0%-16%) of words read correctly, and Tim's mother after an average of 31% (range = 20%-44%) of words read correctly.

Following parent training, Ely's and Sam's mothers consistently increased delivery of praise statements following words read correctly whereas the percentage of words read correctly followed by praise from Tim's mother increased only slightly. Ely's mother's use of praise following words read correctly was somewhat variable following training, occurring after an average of 38% (range = 19%-57%) of words read correctly, which reflects a 32% gain in delivery of praise statements relative to baseline. Sam's mother's use of praise following words read correctly was also somewhat variable following training, occurring after an average of 44% (range = 23%-58%) of words read correctly, which reflects a 31% gain in delivery of praise statements relative to baseline. Tim's mother's use of praise following words read correctly increased slightly following training, occurring after an average of 33% (range = 27% - 39%) of words read correctly, which reflects a 2% gain in delivery of praise statements relative to baseline.

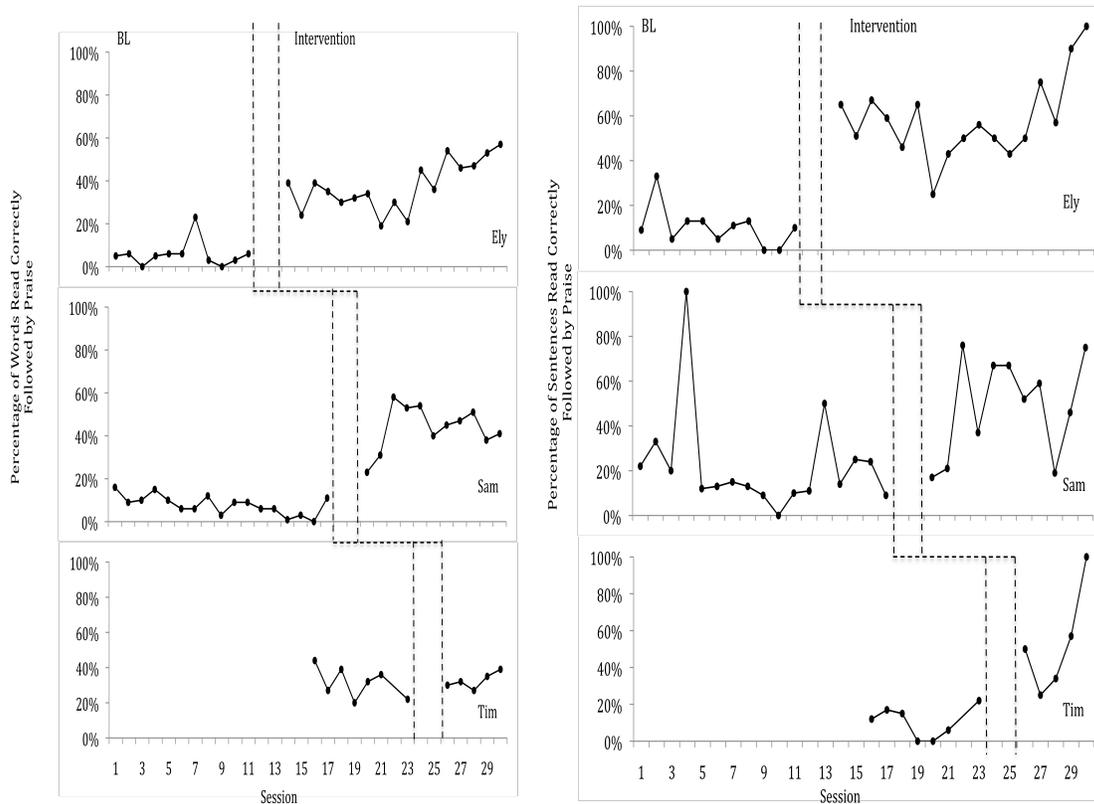


Figure 1. Percentage of words read correctly (left panel) and sentences read correctly (right panel) that were followed by a praise statement.

The percentage of parent-delivered praise statements occurring after a sentence was read correctly for each participant is presented in the right panel of Figure 1, Ely’s are in the top panel, Sam’s are in the middle panel, and Tim’s are in the bottom panel. In baseline, praise was delivered following the correct reading of a sentence infrequently by all parent participants. Ely’s mother delivered praise after an average of 10% (range= 0%-33%) of sentences read correctly, Sam’s mother after an average of 22% (range = 0%-100%) of sentences read correctly, and Tim’s mother after an average of 10% (range = 0%-22%) of sentences read correctly.

Following parent training, all three participant’s mothers consistently increased delivery of praise statements following sentences read correctly. Ely’s mother’s use of

praise increased substantially following training, occurring after an average of 58% (range = 25% - 100%) of sentences read correctly, which reflects a 48% gain in delivery of praise statements relative to baseline. Sam's mother's use of praise was somewhat variable following training, occurring after an average of 49% (range = 17% - 76%) of sentences read correctly, which reflects a 27% gain in delivery of praise statements relative to baseline. Tim's mother's use of praise statements increased following training, occurring after an average of 53% (range = 25% - 100%) of sentences read correctly, which reflects a 43% gain in delivery of praise statements relative to baseline.

Implementation of Three-Step Error Correction Procedure

Parental implementation of the three-step error correction procedure was examined during the word reading and sentence reading activities. The three-step error correction procedure consisted of (a) modeling the correct word after the child read a word incorrectly, (b) having the child repeat the correct word, and (c) delivering a praise statement. The frequency of child reading errors and parental error corrections using the three-step error correction procedure during baseline and following parent training are presented in Figure 2. Overall results of parental implementation of the three-step error correction are presented in Figure 3. In-depth analyses of implementation of each step of the error correction procedure for each participant are presented in Figures 4, 5, and 6.

The frequency of child reading errors and parental error corrections for each participant are presented in Figure 2, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. The percentage of errors corrected using the three-step error correction for each participant are presented in Figure 3, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. As

previously described, functional control in a multiple baseline design across participants is demonstrated when the introduction of an independent variable results in a change in the dependent variable for the participant in which it is introduced. In this case, functional control is demonstrated by an increase in error corrections following parent training. Figure 2, depicting frequency of child reading errors and parental error corrections, illustrates that functional control over use of the error correction procedure was achieved as parental use of the error correction procedure increased following parent training. Figure 3, depicting only parental use of the 3-step error correction procedure, also illustrates that functional control over use of the error correction procedure was achieved as, following the provision of parent training, parental use of the three-step error correction procedure systematically increased.

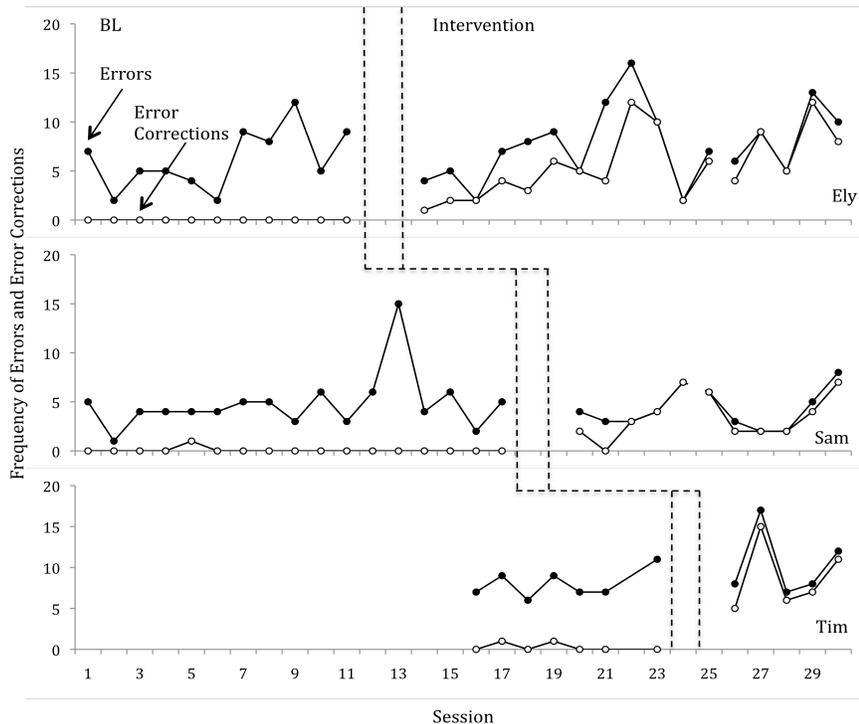


Figure 2. Frequency of child errors and parental use of the three-step error correction procedure.

In baseline, Ely’s mother never used the three-step error correction procedure while Sam and Tim’s mothers used it infrequently. Sam’s mother implemented the three-step error correction procedure after an average of 2% (range= 0% - 30%) of words read incorrectly and Tim’s mother implemented the procedure after an average of 3% (range = 0% - 10%) of words read incorrectly.

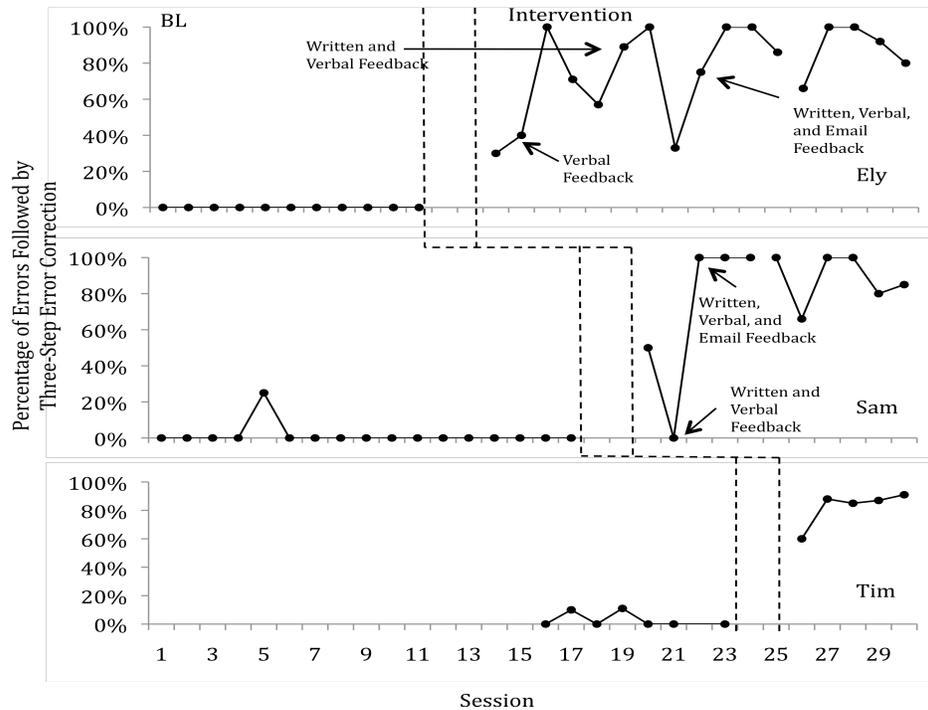


Figure 3. Percentage of child errors followed by the three-step error correction procedure.

Following parent training, all three participant’s mothers began implementing the three-step error correction procedure more frequently. Ely’s mother implemented the three-step error correction procedure following Ely’s errors for an average of 78% (range = 30%-100%) of words read incorrectly, which reflects a 78% gain in implementation. Sam’s mother implemented the three-step error correction procedure following Sam’s errors for an average of 81% (range = 0%-100%) of words read incorrectly, which

reflects a 79% gain in implementation. Tim's mother implemented the three-step error correction procedure following Tim's errors for an average of 84% (range = 60%-90%) of words read incorrectly, which reflects an 81% gain in implementation.

Ely's mother was provided with verbal feedback regarding the prior day's performance immediately before that day's session beginning with session 15 (as indicated by an arrow on the figure) and continuing through session 18. Based on Ely's mother's performance with this level of feedback, it was determined that she may benefit from additional, more explicit feedback. Beginning with Session 19, Ely's mother was provided with verbal feedback *plus* written feedback for use while she was assisting Ely in the daily take home reading assignment. This level of feedback was provided for Sessions 19-21. Because Ely's mother was still not meeting the criteria of correcting at least 90% of all errors for three consecutive sessions with this level of feedback, another component was added. Beginning with Session 22, Ely's mother was provided with immediate (sent within two hours of the session) feedback on her daily performance via email in addition to the verbal and written feedback that was already being provided. At that point, Ely's mother began implementing the error correction procedure more consistently. Beginning with session 27, Ely's mother received no feedback between sessions due to the fact that the family went out of town. Ely and his mother continued to complete one reading assignment a day and record the sessions, but the sessions were not reviewed and scored until two weeks later when they returned.

Sam's mother received verbal and written feedback immediately before Session 21. Based on Sam's mother's rate of correcting errors during that session (0%), the immediate email feedback component was added prior to Session 22. Tim's mother

received verbal and written feedback prior to session 27 as well as immediate email feedback directly following session 26.

To examine use of each step of the error correction procedure in more depth, the percentage of error corrections that included each step of the three-step error correction procedure for each participant during baseline and intervention are presented in Figures 4 (Ely), 5 (Sam), and 6 (Tim).

Ely. Results of Ely's mother's use of each step of the three-step error correction procedure are depicted in Figure 4. In baseline, Ely's word reading errors were followed by the model step of the three-step error correction procedure for an average of 18% (range = 0%-60%) of errors, the response step for an average of 18% (range = 0%-60%) of errors, and the praise step for an average of 2% (range = 0%-20%) of errors.

Following parent training, Ely's mother implemented all three steps of the error correction procedure more frequently; in fact she implemented both the model and response components with 100% accuracy after the 8th session of intervention. Ely's mother implemented the model step of the error correction procedure after an average of 81% (range = 20%-100%) of Ely's word reading errors, which reflects a 63% gain in implementation. Implementation of the response step occurred after an average of 77% (range = 20%-100%) of Ely's word reading errors, which reflects a 59% gain in implementation. Implementation of the praise step was more variable, praise occurred after an average of 68% (range = 0%-100%) of word reading errors, which reflects a 66% gain in implementation. It is important to note that the praise step never directly followed a word reading error, but always occurred after the model and/or response steps of the three-step error correction procedure.

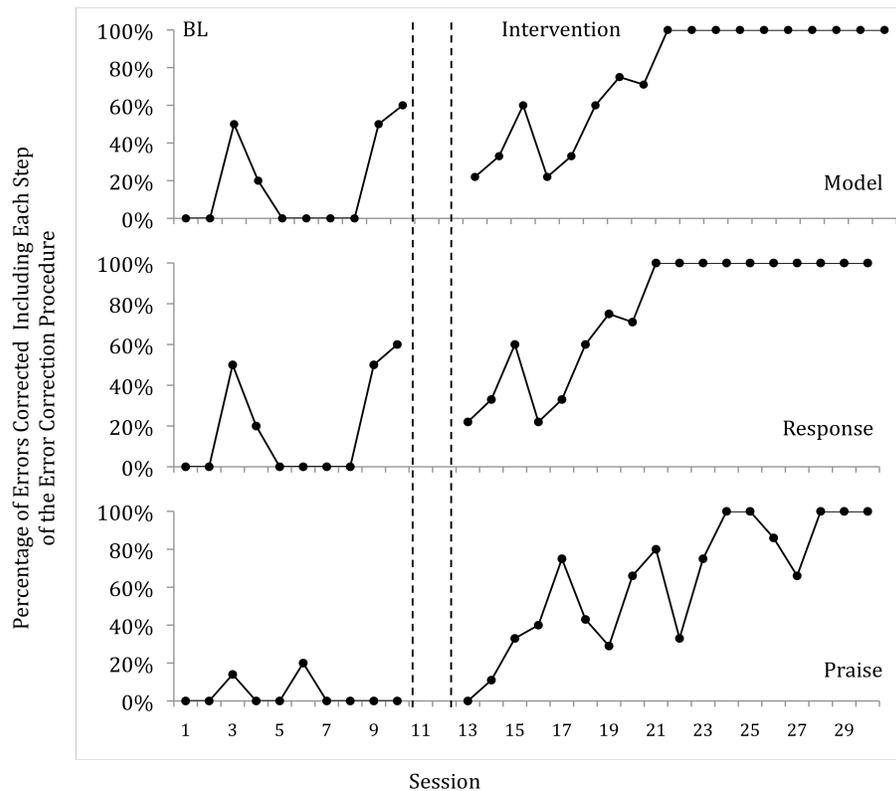


Figure 4. Percentage of Ely's corrected word reading errors that included each step of the error correction procedure.

Sam. Results of Sam's mother's use of each step of the three-step error correction procedure are depicted in Figure 5. In baseline, Sam's word reading errors were followed by the model step of the three-step error correction procedure for an average of 26% (range = 0-100%) of errors, the response step for an average of 22% (range = 0-100%) of errors, and the praise step for an average of 2% (range = 0%-20%) of errors.

Following parent training, Sam's mother implemented all three steps of the error correction procedure more frequently. Sam's mother implemented the model step of the error correction procedure after an average of 89% (range = 30%-100%) of Sam's word

reading errors, which reflects a 63% gain in implementation. Implementation of the response step occurred after an average of 89% (range = 30%-100%) of Sam's word reading errors, which reflects a 67% gain in implementation. Implementation of the praise step occurred after an average of 88% (range = 30%-100%) of word reading errors, which reflects a 78% gain in implementation.

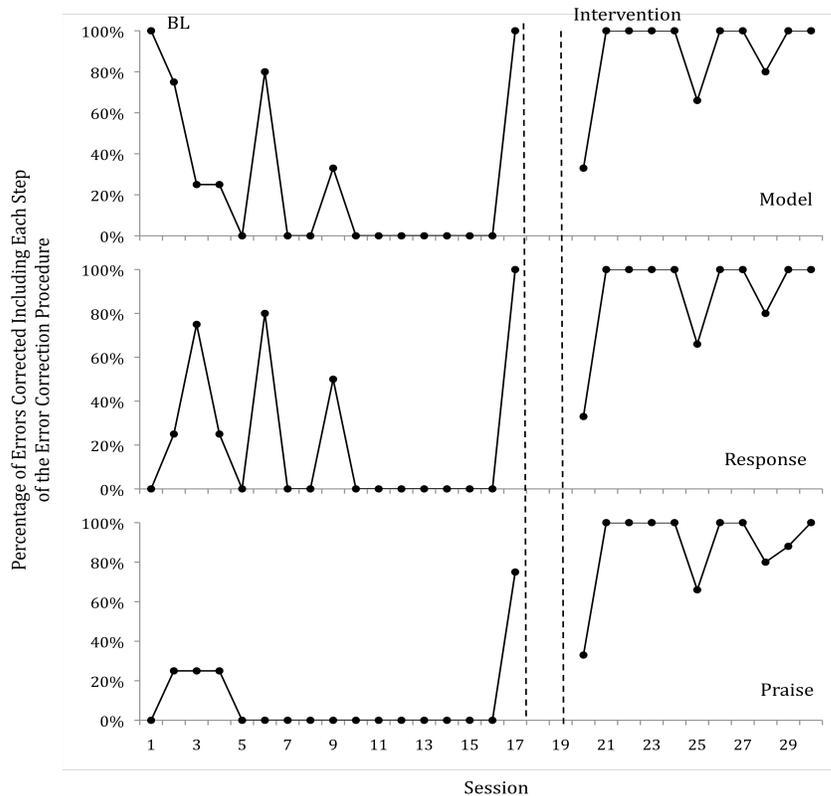


Figure 5. Percentage of Sam's corrected word reading errors that included each step of the error correction procedure.

Tim. Results of Tim's mother's use of each step of the three-step error correction procedure are depicted in Figure 6. In baseline, Tim's word reading errors were followed by the model step of the three-step error correction procedure for an average of 11% (range = 0%-30%) of errors, the response step for an average of 17% (range = 0 %-70%) of errors, and the praise step for an average of 4% (range = 0%-2%) of errors.

Following parent training, Tim’s mother implemented all three steps of the error correction procedure more frequently. Tim’s mother implemented the model step of the error correction procedure after 100% of Sam’s word reading errors, which reflects an 89% gain in implementation. Implementation of the response step also occurred after 100% of Tim’s word reading errors, which reflects an 83% gain in implementation. Implementation of the praise step occurred after an average of 80% (range = 60%-90%) of word reading errors, which reflects a 76% gain in implementation.

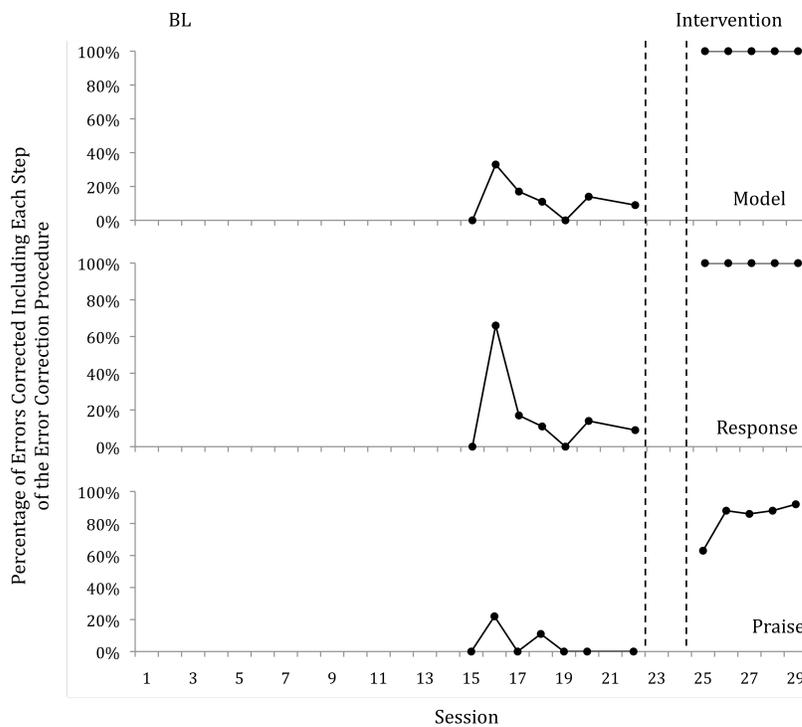


Figure 6. Percentage of Tim’s corrected word reading errors that included each step of the error correction procedure.

Social Validity

A summary of academic parent training acceptability questionnaire ratings is provided in Table 4. Parent ratings from all three parents were three or greater on a 4-point scale as to whether (a) parents found the information provided during the parent

training helpful, (b) parents found the error correction procedure taught during training useful, (c) parents will continue to use the error correction procedure and other techniques taught during the parent training in the future when working with their child, and (d) the techniques taught during the parent training will have a positive impact on child reading skills. All parents found the academic parent training and experience working with their child at the CTL Reading Clinic beneficial to their respective child's overall reading performance and would recommend the parent training to other parents.

Table 4

Parent Rating of Academic Parent Training Acceptability

Child	Information provided helpful	Error correction procedure easy to use	Skill will be used in future when working with child	Child's reading skills improved	Recommend to others
Ely	4	3	4	4	Yes
Sam	3	4	4	4	Yes
Tim	4	4	4	4	Yes

Child Reading Outcomes

Accuracy. The percentage of words read correctly during completion of take-home assignments for each participant is presented in Figure 7, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. Words read correctly in isolation is presented in the left panel and sentences read correctly is presented in the right panel. In baseline, the percentage of words read correctly was high for all participants. Ely's percentage of words read correctly per take home assignment averaged 92% (range = 80%-97%), Sam's averaged 93% (range = 89%-97%), and Tim's averaged 92% (range = 89%-97%).

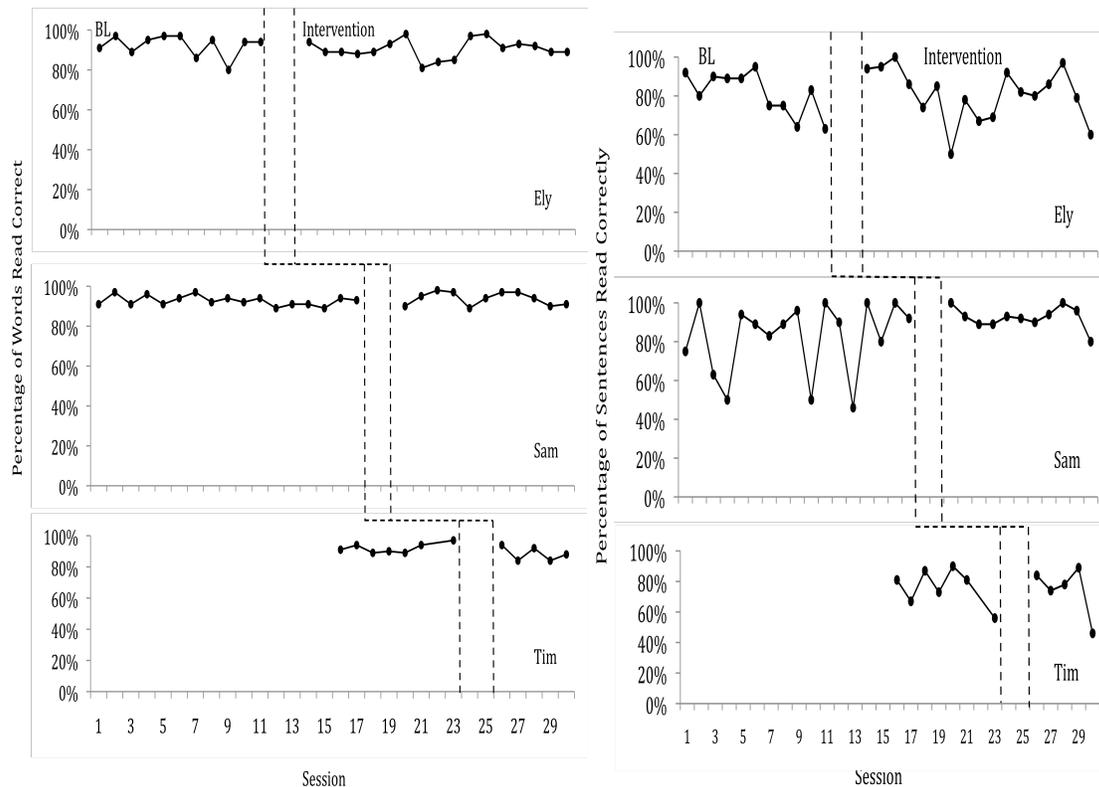


Figure 7. Percentage of words read correctly (left panel) and sentences read correctly (right panel) during completion of daily take-home assignment.

Following parent training, all three participant’s accuracy remained relatively high and stable. Ely’s percentage of words read correctly following parent training averaged 91% (range = 81%-98%), which reflects a 1% decrease in words read correctly relative to baseline. Sam’s percentage of words read correctly following parent training averaged 94% (range = 89%-98%), which reflects a 1% increase in words read correctly relative to baseline. Tim’s percentage of words read correctly following parent training averaged 88% (range = 84%-94%), which reflects a 4% decrease in words read correctly relative to baseline. Taken together, these results indicate that parent training was not

functionally related to an increase in words read correctly during completion of daily take-home assignments.

The percentage of sentences read correctly is presented in the right panel of Figure 7, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. In baseline, the percentage of sentences read correctly was variable for all participants. Ely's percentage of sentences read correctly per take home assignment averaged 81% (range = 63%- 95%), Sam's averaged 80% (range = 46%-100%), and Tim's averaged 76% (range = 56%-90%).

Following parent training, accuracy for two of the participants, Ely and Tim, remained variable while Sam's accuracy stabilized and increased. Ely's percentage of sentences read correctly following parent training averaged 81% (range = 50%-100%), which is equal to the percentage of sentences read correctly in baseline. Sam's percentage of sentences read correctly following parent training averaged 92% (range = 80%-100%), which reflects a 12% increase in sentences read correctly relative to baseline. Tim's percentage of sentences read correctly following parent training averaged 73% (range = 46%-89%), which reflects a 2% decrease in sentences read correctly relative to baseline. Taken together, these results indicate that parent training was not functionally related to an increase in sentences read correctly during completion of daily take-home assignments.

Oral reading fluency. Scores on the weekly administered DIBELS Oral Reading Fluency (ORF) measure are presented in Figure 8, Ely's are in the top panel, Sam's are in the middle panel, and Tim's are in the bottom panel. For each, the solid horizontal line depicts the score needed to meet the end-of-year first grade benchmark of 40 correct

words per minute. Ely never met the end-of-year benchmark for this measure. Sam met the benchmark one time out of the last three administrations of this measure. Tim never met the end-of-year benchmark for this measure.

Average weekly improvement for each participant was calculated using the method described by Hasbrouck and Tindal (2005) in which the first ORF benchmark score taken for a student (fall benchmark score for students in grades two through eight, winter benchmark score for students in first grade) is subtracted from the last ORF score taken (spring benchmark) and divided by the number of weeks between the two scores. Although Hasbrouck and Tindal intended this method to be used with benchmark scores, this was not possible for this study as only one benchmark score was collected. Instead, the first and last progress monitoring DIBELS ORF scores were used to calculate average weekly growth.

According to Hasbrouck and Tindal, a student in first grade who is performing at the 10th percentile (reading approximately 15 correct words per minute in the spring of first grade) can be expected to improve by .6 words per week; a student performing at the 25th percentile (reading approximately 28 correct words per minute in the spring of first grade) can be expected to improve by 1.0 words per week; and a student performing at the 50th percentile (reading approximately 53 correct words per minute in the spring of first grade) can be expected to improve by 1.9 words per week. This growth can be expected *if* the student is receiving evidence-based reading instruction that meets his specific needs (e.g., focuses on the specific skill deficits of the student). Based on the first DIBELS ORF data points collected for each participant, Ely and Tim were performing at approximately the 10th percentile with ORF scores of 15 and 17 correct

words per minute, respectively. Sam was performing at approximately the 25th percentile with an ORF score of 34 correct words per minute.

The average weekly growth was calculated for the participants in this study by subtracting the first DIBELS ORF progress monitoring score from the last DIBELS ORF progress monitoring score and dividing the difference by 8, the number of weeks between the first and last progress monitoring data points. Ely's average weekly growth was 1.0 words per week, Sam's average weekly growth was 0.5 words per week, and Tim's average weekly growth was 1.4 words per week. The growth rates for Ely and Tim are promising as they exceeded the expected growth rates delineated by Hasbrouck and Tindal, suggesting that if they continue to receive evidence-based reading instruction they may be able to close the gap between their current level of performance and that of their same grade peers who are reading at grade-level. However, Sam's growth rate was less promising as he did not meet the expected growth rate as outlined by Hasbrouck and Tindal, which suggests he may need a more intensive reading intervention in order to close the gap between his current level of performance and that of his grade-level peers who are reading at grade level.

Because all three participants were significantly below benchmark at the onset of this study, it is not surprising that they did not reach benchmark by the end of the 8-week intervention. One possible explanation for this is that 8-weeks of intervention was not a sufficient amount of time to catch these students up to grade-level benchmark given the severity of their reading difficulty. Perhaps, if the students had received intervention for a longer period of time, ORF scores would have eventually met the end-of-year first grade benchmark of 40 correct words per minute. Another possible explanation is that

the *Read Well I* program was not an appropriate fit for the needs of these particular students. Regardless of why the students did not meet the end of year benchmark, it is important to note that the gap between these students and their peers who are currently reading at grade level will not be closed with the current rate of growth.

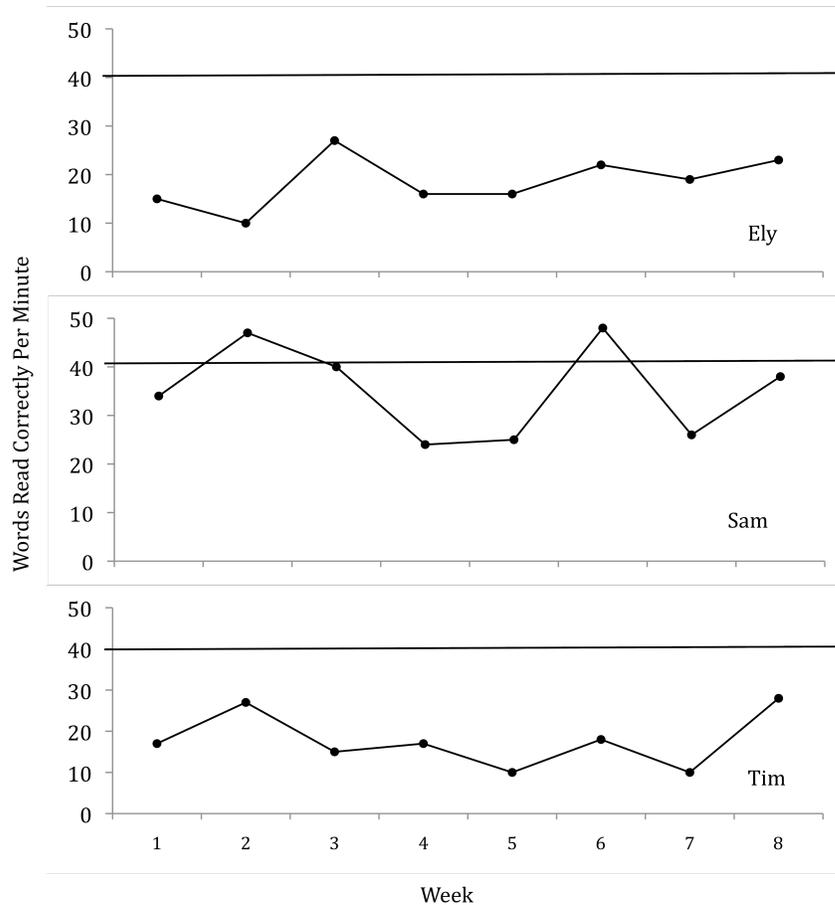


Figure 8. Words read correctly per minute on the DIBELS Oral Reading Fluency measure.

Nonsense word fluency. Scores on the weekly Nonsense Word Fluency (NWF) measure are presented in Figure 9, Sam’s are in the top panel and Tim’s are in the bottom panel. Ely was not administered this measure during the course of the study as he had been administered the first grade spring benchmark prior to the start of this study and had met benchmark for this measure. For each, the solid horizontal line depicts the score

needed to meet the end-of-year first grade benchmark of 50 correct sounds per minute. Sam met the end-of-year benchmark for the NWF measure three times out of the last four administrations. Tim never met benchmark for this measure. The same possible reasons for not meeting the ORF benchmarks could be applied to this measure.

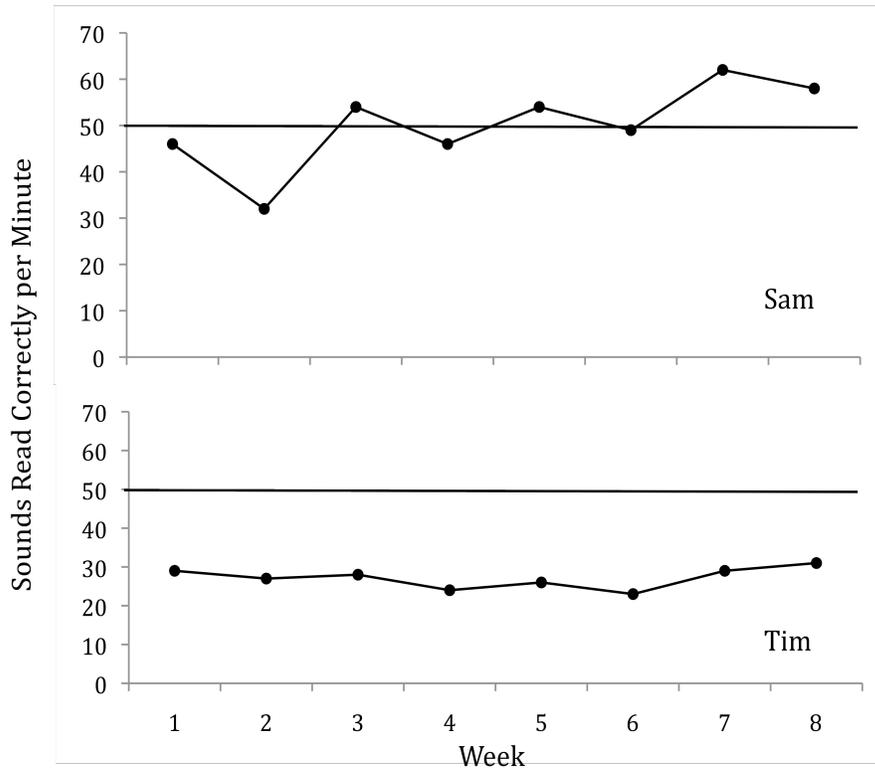


Figure 9. Sounds read correctly per minute on the DIBELS Nonsense Word Fluency measure.

CHAPTER IV

GENERAL DISCUSSION

This study utilized a concurrent multiple baseline design across participants to examine effects of a parent training intervention on parent behavior during completion of reading assignments. Previous research has supported the utility of parental involvement to improve reading outcomes for students who are reading below grade-level (Fiala & Sheridan, 2003; Cadieux & Boudreault, 2005; Love & Van Biervliet, 1984; Thurston & Dasta, 1990; Gortmaker et al., 2007; Resetar et al., 2006) but no studies have documented effects of training parents on specific skills to use when their children are completing reading assignments. This study addressed this gap in the literature by evaluating effects of an academic parent training intervention on parent behavior that may contribute to overall improvements in child reading outcomes over time. Specifically, this study examined 1) effects of parent training on parent's implementation of an error correction procedure and delivery of praise statements and 2) generalization of treatment effects from the clinic setting to the home setting.

Summary of Findings

Overall, parent training was functionally related to increases in parent-delivered praise statements and error corrections across all participants. Inspection of direct observation data showed an effect for changes in delivery of praise statements following the correct reading of *sentences* for all participants. However, an effect for praise following *words* read correctly in isolation (i.e., not in the context of a sentence) was observed for only two of three participants. This lack of effect was not surprising considering the relatively high rates of praise following words read correctly in isolation

for this participant during baseline. Inspection of the direct observation data also shows an effect for changes in error corrections following child word reading errors for all participants. These increases in delivery of praise statements and error corrections maintained during generalization probes that took place in the participants' homes for two of the participants.

All parent participants rated the parent training intervention high on a questionnaire following the conclusion of this study. In general, parents indicated (a) the parent training provided helpful information, (b) the error correction procedure taught was easy to use and something they would continue to use, (c) the parent training would have a positive impact on their child's reading skills, and (d) they would recommend the parent training to other parents of children who struggle with reading.

Parent Training as a Supplement to Reading Intervention

Results of this study suggest academic parent training may be a promising supplement to tier I or tier II intervention for struggling readers. One reason academic parent training may be a promising supplement to school reading intervention is that it provides a strategy for involving families in their child's education, which research suggests is one way in which to improve student outcomes (Christenson, 2004; Christenson & Sheridan, 2001). Another reason for providing academic parent training is that it has been demonstrated to change parent behavior in ways that are likely to improve child reading performance over time. Similar to peer tutoring, training parents to systematically work with their child is an efficient intervention that could be a supplement to reading instruction. Research has demonstrated that family-school collaboration can lead to improved student outcomes (Christenson, 2004), so it stands to

reason that involving parents in reading intervention may result in improved reading outcomes for students receiving these supports.

Teaching parents to systematically work with their child at home could potentially benefit the child in many ways. Providing parents with the skills to complete reading activities at home that are directly related to instruction at school allows for increased opportunities to practice and increased opportunities to receive performance feedback, which could potentially lead to improved reading outcomes. The parent training provided in this study taught parents the skills necessary to systematically work on reading accuracy and fluency with their child, which are reading skills that many students struggle with (National Reading Panel, 2000). Given that past research has demonstrated positive effects of reading interventions targeting fluency (Yurick et al., 2006), it seems logical that parent training focusing on these skills *and* sustained parental use of these skills would result in improved reading outcomes. Although such effects were not observed in this study that could be due, not to the lack of effectiveness of parental implementation of the skills, but to the short duration of data collection. Future research should evaluate the added benefits of parent training in these skills over a longer duration.

Although not evaluated in this study it is possible that training parents to assist their child in reading could have indirect benefits. One potential benefit is that when parents get involved with reading intervention they are providing a model for the child that reading is important, which could lead the child to value reading. Parents may also benefit from training by feeling less worried and/or frustrated by their child's struggle with reading because they now have an idea of how to help their child become a better

reader. It may also be the case that training parents of children in younger grades (i.e., kindergarten through third grade) may help establish reading at home as a typical routine thus preventing a history of not reading or reading being a struggle at home from developing.

The Role of Feedback on Treatment Integrity

When implementing an intervention it is important to maintain high levels of treatment integrity to ensure that the individual receiving the intervention comes into contact with the components that are presumed to influence behavior (Noell & Ganskele, 2006). Research suggests that as treatment integrity decreases, interventions become increasingly likely to lose effectiveness or fail altogether (Noell, Duhon, Gatti, & Connell, 2002). One way to keep treatment integrity high and thus increase the likelihood that intervention has a positive effect on behavior is to deliver performance feedback to the individual implementing the intervention. There is a large body of research demonstrating positive effects of performance feedback on treatment integrity (Coddington, Feinburg, Dunn, & Pace, 2005; DiGennaro, Martens, & McIntyre, 2005; Noell et al., 2002; Witt, Noell, LaFleur, & Mortenson, 1997). Research has demonstrated that performance feedback can increase treatment integrity when (a) negative reinforcement contingencies are in place (DiGennaro et al., 2005), (b) graphs of implementation and child outcomes are reviewed (Noell et al., 2002), (c) feedback is provided daily (Witt et al., 1997), and (d) feedback is provided to teachers (Coddington et al., 2005).

In the present study, two of the participants were not able to implement the error correction procedure until a 3-component feedback system was implemented. The mothers of two of the participants, Ely and Sam, did not consistently implement the error

correction procedure with verbal feedback alone or with verbal feedback plus written feedback. Following the addition of the email feedback component, both Ely's and Sam's mothers were able to implement the error correction procedure more consistently. Due to the pattern of responding observed with Ely and Sam's mothers, Tim's mother immediately received all three types of feedback following the first intervention session. Results of this study suggest that verbal performance feedback alone delivered directly before the next session was not sufficient for achieving high rates of treatment integrity; however, it is unclear if the written or email feedback alone would have resulted in high treatment integrity. Although providing these three feedback components was not overly time intensive, it would be beneficial to understand which components of feedback are most likely to result in high treatment integrity.

Directions for Future Research

This study provides initial support for the effectiveness of an academic parent training intervention to increase parental behaviors that may be associated with improved child reading outcomes. However, research on the intervention used in this study is still in its infancy. Suggestions for future research are discussed below.

Efficacy to improve child reading outcomes. Additional research should be conducted in which data collection on parental behaviors and child reading outcomes following parent training are collected for a longer duration of time. It is no surprise that oral reading fluency gains were not observed during this study as the study only took place over the course of 8 weeks. Future research should examine long term effects of the parent training on child reading outcomes.

Component analysis. Future research should include a component analysis to determine the most salient features of the academic parent training intervention. The intervention included several components (e.g., teaching big ideas in reading, tips for setting up a reading environment at home), many of which were not directly related to the parental behaviors of interest in this study (i.e., delivery of praise statements, error corrections). It is unknown whether these features are effective or necessary to the success of the parent training intervention. Identifying the most salient components of this intervention would be useful for simplifying the parent training, thus making it more feasible for use within a multi-tiered model of support.

In addition to the component analysis of the actual parent training intervention, future research should evaluate effects of each of the three types of feedback (verbal, written, immediate email) provided during this study to determine which results in high treatment integrity in the least amount of time.

Replication. The present study utilized a small sample size of 3 participants. Future research should replicate findings across greater numbers of participants from diverse backgrounds. This research should also be replicated to determine the effectiveness of the academic parent training intervention outside of the clinic setting (e.g., in elementary schools). In addition, future studies should examine effects of the intervention with children from different grades to determine for whom this intervention would be most effective.

Treatment integrity and feedback. Future research should evaluate procedures for increasing treatment integrity more rapidly following initial parent training. Ely and Sam's mothers required a more intensive level of feedback than was originally planned

for this study in order to meet the criterion for entering the generalization phase, but it is unclear if this would have been the case had there been an incentive in place (e.g., negative reinforcement contingency) for high treatment integrity. Similarly, it is unclear if the criterion would have been met any sooner had the more intensive feedback (emails within 2 hours of the daily session) been in place from the beginning of intervention phase.

In addition, the majority of research evaluating effects of performance feedback on treatment integrity has been conducted with teachers and other school personnel. Future research should evaluate effects of performance feedback on parental treatment integrity.

Brief experimental analysis. Future research should evaluate the utility of brief experimental analysis of individual students' reading difficulties to individualize parent training to meet the unique needs of students (Daly, Martens, Hamler, Dool, & Eckert, 1999). The present study provided parent training that was the same for all three participants, so it is unclear if a more individualized parent training would have resulted in improved reading outcomes for the child participants.

Limitations

The present study utilized a concurrent multiple baseline design to control for threats to validity. Although the design controlled for several threats to validity, some threats to external validity exist and are described below along with other limitations. Because these limitations exist, results of this study should be interpreted with caution.

Threats to external validity. The present study took place at one university-based clinic setting; therefore results may not be generalizable to other settings such as

schools. In addition, participants in this study were those who sought out support for a child who was struggling; therefore effects shown for the parents in this study may not be generalizable to parents who are not actively seeking additional support.

Other limitations. The results of this study are limited in that generalization data were only collected for two of the three participants due to lack of time. Had the third participant been included in the study from the beginning, it may have been possible to collect generalization data for all participants. Another limitation of this study is that maintenance data were not collected to determine if changes in parent behavior were still present following the conclusion of this study. Maintenance data demonstrating the continued use of procedures taught during parent training would provide additional social validity data and support for implementing this intervention to improve student outcomes in a school setting.

The results of this study are also limited in that reading gains were not demonstrated for any of the participants. While the study examined DIBELS ORF data for each participant, *Read Well I* in-program assessment data were not analyzed to determine if reading gains were made following parent training. It is possible that the participants made gains in reading that were undetected by the DIBELS measures.

Although it is impossible to know why the students in this study did not make gains in overall reading performance as measured by DIBELS, there are several plausible explanations. One reason that reading gains may not have been observed for these participants is that the *Read Well I* program may not have been indicated for these particular students' needs. *Read Well I* was a default program that all participants received regardless of whether it was the best fit for their particular reading deficits. Had

students been placed in other programs that more directly addressed their specific reading skill deficits, we may have seen larger growth rates. Another possible explanation for the lack of reading gains over the course of this study is the relatively low levels of fidelity of implementation during the small group reading instruction that was taking place at the reading clinic. Research suggests that poor fidelity of implementation can have an impact on student outcomes, so had the interventionists providing the small group reading instruction done so with better fidelity we may have seen larger growth rates for these participants.

APPENDIX A

UNIT 20, DAY 1 TAKE HOME

Sound Review: Have your child say each of the sounds below.

S e as in emu m T Th Wh oo
-ck sh ea i as in insect r -y ar

Sounding Out Smoothly: Have your child say the underlined part, sound out the word smoothly, then read the whole word the fast way.

tea moon smack drank nest
then ask dear cry my
shy send read trick him

Tricky Words: Have your child read each of the tricky words below. These words cannot be sounded out.

Want wasn't what would should

Story Reading: Have your child read the Read Well I, Unit 20 Day 1 story 3 times before the next tutoring session.

APPENDIX B

UNIT 20, DAY 2 TAKE HOME

Sound Review: Have your child say each of the sounds below.

Sh	-y	c	Th m + p	ee	Wh	d	p
wh	-ck	ea m + p	i as in insect	oo	e as in emu	ar	sp

Sounding Out Smoothly: Have your child say the underlined part, sound out the word smoothly, then read the whole word the fast way.

<u>dark</u>	sky	<u>w</u> eed m + p	why	rest	p
<u>wh</u> en	<u>a</u> sk m + p	<u>h</u> ear	dry	<u>m</u> y	p
shy	<u>k</u> itten sp	<u>m</u> ee <u>t</u>	<u>s</u> tars m + p	<u>h</u> en	

Tricky Words: Have your child read each of the tricky words below. These words cannot be sounded out.

to	are	where m + p	couldn't m + p	there	p
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Story Reading: Have your child read the Read Well I, Unit 20 Day 2 story 3 times before the next tutoring session.

APPENDIX C

FIDELITY OF IMPLEMENTATION CHECKLIST

Name of Interventionist: _____ Date: _____

Name of Observer: _____ Number of Students in Group: _____

Start Time: _____ Stop Time: _____ Total Time: ____
 _____ min

Scoring	Critical Instructional Features	Comments
Yes Mostly Sometimes No	Instructor starts lesson on time	
Yes Mostly Sometimes No	Instructor completes all steps of 1 st activity before moving on to next activity	
Yes Mostly Sometimes No	Instructor uses error correction procedure	
Yes Mostly Sometimes No	All students participated with group and written responses	
Yes Mostly Sometimes No	Instructor maintains good pacing and enthusiasm	
Yes Mostly Sometimes No	Instructor uses clear signals	
Yes Mostly Sometimes No	Instructors gives students individual turns	
Yes Mostly Sometimes No	Instructor uses specific praise (“I like the way you...”)	
Yes Mostly Sometimes No	Students are engaged in lesson	
Yes Mostly Sometimes No	Behavior expectations are posted and reviewed at beginning of lesson	

SCORING FIDELITY OF IMPLEMENTATION:

- Yes (90% or more) = 3 points
- Mostly (60-90%) = 2 points
- Sometimes (<60%) = 1 point
- No = 0 points

Sum of all points: _____ / Total points possible = _____%

APPENDIX D

SOCIAL VALIDITY SURVEY FOR PARENTS

Please complete this survey and return it so we can get an idea of how to improve our services in the future.

I found the information provided during the parent trainings helpful.

Strongly agree agree disagree Strong disagree

I like the systematic error correction procedure taught during the parent training.

Strongly agree agree disagree Strong disagree

I will continue to use the error correction procedure taught during the parent trainings when I work with my child on reading activities.

Strongly agree agree disagree Strong disagree

I believe the use of the systematic error correction will help my child become a better reader.

Strongly agree agree disagree Strong disagree

Overall, I found the experience of working with my child at the CTL Reading Clinic beneficial to his overall reading performance.

Strongly agree agree disagree Strong disagree

What did you find most helpful/beneficial about the parent trainings and/or your overall experience as a participant in the research study? _____

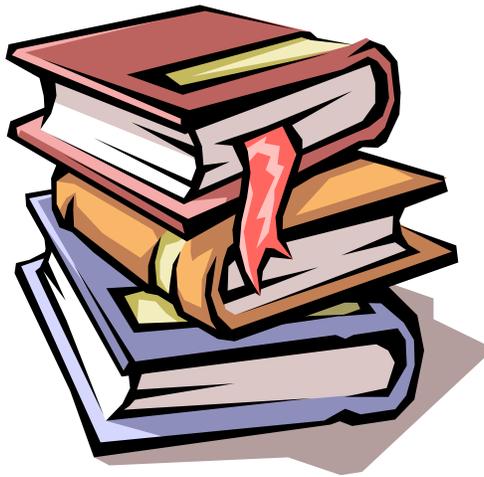
What would you have liked to learn more about, if anything, during the parent trainings? __

Would you recommend the parent training you received to someone else who was interested in learning how to work more effectively with their child on reading activities?

Yes No

APPENDIX E

PARENT HANDBOOK FOR INCREASING EARLY LITERACY SKILLS



 **TL Reading Clinic**

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Center on Teacher and Learning (CTL) Mission Statement

The mission of the CTL Reading Clinic is to provide school-age children in the greater Eugene area and Lane County with a facility and staff dedicated to the prevention and remediation of reading failure. Our clinic will assist children in grades K-6 who are experiencing difficulty reading by providing individualized assessment and intensive, research-based instruction. In doing so, the clinic will rely on the most rigorous scientific evidence in reading. The first priority of the CTL Reading Clinic is to help our community produce successful and imaginative readers.

Purpose

Learning to read is one of the most critical skills a child acquires during his or her early school experience. Unfortunately, reading does not come easily to all beginning elementary students. For example:

- ✓ Approximately 10 million school-aged children in the United States are considered poor readers (Fletcher & Lyon, 2001).
- ✓ Evidence suggests that 88% of children who are identified as poor readers at the end of first grade are likely to be poor readers at the end of fourth grade (Juel, 1988).
- ✓ In 2007, 34% of the nation's fourth grade students and 27% of eighth grade students scored below basic proficiency in reading on the National Assessment of Educational Progress (NAEP).
- ✓ Children with the most serious reading problems are at an increased risk for high school dropout (10-15%) and only 2% complete a four-year college program (National Reading Panel, 2000).

Often, these young students become frustrated and develop a negative attitude toward school and reading. If overlooked, these struggling readers are left at a serious disadvantage in their school years and beyond.

Parent Handbook

The purpose of this handbook is to provide parents with information on: (a) the Big Ideas in reading, (b) how to create a successful working environment at home, (c) how to provide important corrective feedback while working on reading activities, and (d) how to make reading fun and motivating for children through the use of positive feedback and reinforcement.

*This information was taken from the CTL Reading Clinic website
(<http://ctlreadingclinic.uoregon.edu/index.html>)*

Big Ideas in Beginning Reading



In 1997, congress asked the NICHD, along with the U.S. Department of Education, to form the National Reading Panel to review research on how children learn to read and determine which methods of teaching reading are most effective based on the research evidence.

Specifically, congress asked the panel to:

- ✓ Review all the research available (more than 100,000 reading studies) on how children learn to read.
- ✓ Determine the most effective evidence-based methods for teaching children to read.
- ✓ Describe which methods of reading instruction are ready for use in the classroom and recommend ways of getting this information into schools.
- ✓ Suggest a plan for additional research in reading development and instruction.

The National Reading Panel's analysis made it clear that the best approach to reading instruction is one that incorporates explicit instruction in **phonemic awareness**, systematic **phonics** (i.e., alphabetic principle) instruction, methods to improve **fluency**, and ways to enhance **vocabulary** and **comprehension**. The National Reading Panel's analysis defined the Big Ideas in reading.

*This information was taken from the DIBELS website
(https://dibels.uoregon.edu/resources/big_ideas/big_ideas.php)*

Phonemic Awareness

What is Phonemic Awareness?

- ✓ The ability to identify and manipulate individual sounds within words
- ✓ The awareness that spoken words are composed of abstract sounds and the ability to manipulate those sounds

Examples of Phonemic Awareness Activities:

1. **Sound and word discrimination:** What word doesn't belong with the others: *sat, fat, rat, pan?* (Pan)
2. **Rhyming:** What's a word that rhymes with *cat?* (rat, bat)
3. **Blending:** What word is made up of the sounds /k/ /a/ /t/? (cat)
4. **Phonemic segmentation:** Tell me the sounds in *rat.* (/r/ /a/ /t/)
5. **Phoneme manipulation:** What word would you have if you changed the /t/ in *rat* to an /n/? (ran)

Why is Phonemic Awareness important?

- ✓ Phonemic awareness is essential for learning to read in an alphabetic writing system
- ✓ Phonemic awareness is a prerequisite for learning to read and spell

Alphabetic Principle

What is the Alphabetic Principle?

The alphabetic principle is combination of:

- ✓ Alphabetic Understanding: The understanding that letters represent sounds and that whole words are made of individual sounds.
- ✓ Phonemic Awareness: The ability to identify and manipulate individual sounds within words
 - Regular Words: words in which all the letters represent their most common sounds
 - Irregular Words: words that cannot be decoded because either (a) the letters are not representing their most common sounds, or (b) the child has not yet learned the letter-sound correspondences in the word

Examples of Alphabetic Principle Skills:

1. **Letter-sound associations**: The ability to state the sound of a letter when asked.
2. **Blending**: The ability to blend sounds when shown letters.
3. **Reading pseudowords**: The ability to use decoding skills to read made up words (e.g., vom, mip, nez)
4. **Word identification**: The ability to read a word

Why is the Alphabetic Principle important?

- ✓ Understanding that there are predictable relationships between sounds and letters helps children decode and read familiar and unfamiliar words.
- ✓ Mastery of this skill is a prerequisite for reading connected text accurately and fluently.

Accuracy and Fluency

What is Accuracy and Fluency?

- ✓ Fluency is the ability to read words with no noticeable effort and minimal error.
- ✓ Also referred to as *automaticity*, which is the ability to effortlessly translate letters-to-sounds-to-words.

Children who Read Fluently:

- ✓ Identify letter-sound correspondences accurately and quickly
- ✓ Identify familiar spelling patterns
- ✓ Apply phonemic awareness and alphabetic understanding skills to identify words and read connected text accurately.

Why are Accuracy and Fluency important?

- ✓ Accuracy and fluency are essential for children to gain meaning from what they read.
- ✓ Children who read accurately and fluently are more likely to enjoy reading.

Vocabulary

What is Vocabulary?

- ✓ Vocabulary is the knowledge of words and word meanings.
- ✓ There are two types of vocabulary knowledge:
 - Expressive vocabulary: the ability to express ideas in speaking and in writing
 - Receptive vocabulary: the ability to receive information through listening and reading

Things to Know About Vocabulary:

- ✓ Most vocabulary is learned indirectly through listening and reading.
- ✓ Children who read even 10 minutes a day outside of school experience substantially higher rates of vocabulary growth between 2nd and 5th grade than children who do little or no reading.

Why is Vocabulary important?

- ✓ Vocabulary plays an important part in learning to read.
- ✓ Vocabulary plays an important part in reading comprehension.

Comprehension

What is Comprehension?

- ✓ Comprehension is a complex cognitive process that allows a reader to extract meaning from text.

Factors That Impact Comprehension:

- ✓ Phonemic awareness
- ✓ Alphabetic understanding
- ✓ Accuracy and fluency with connected text
- ✓ Vocabulary knowledge
- ✓ Prior knowledge
- ✓ Engagement and interest in what is being read

Why is Comprehension important?

- ✓ Understanding what is read, *comprehending*, is the reason for reading.
- ✓ Children need comprehension skills in order to become independent learners.

Letter Sounds and Sound Combinations Introduced in *Read Well I*

I Voiced (word) Unit A	Mm /mmm/ <i>Monkey</i> Unit B	Ss /sss/ <i>Snake</i> Unit 1	Ee /eee/ (long) <i>Emu</i> Unit 2	Ee /eee/ (long) <i>Bee</i> Unit 2	Mm /mmm/ <i>Monkey</i> Unit 3
Aa /aaa/ <i>Ant</i> Unit 4	Dd /d/ (not duh) <i>Dinosaur</i> Unit 5	Th /thth/ <i>The</i> Unit 6	Nn /nnn/ <i>Nest</i> Unit 7	Tt /t/ (not tuh) <i>Turkey</i> Unit 8	Ww /www/ (woo) <i>Wind</i> Unit 9
li /iii/ (short) <i>Insects</i> Unit 10	Th /tt/ <i>The</i> Unit 10	Hh /h/ (not huh) <i>Hippo</i> Unit 11	Cc /c/ (not cuh) <i>Cat</i> Unit 12	Rr /rr/ <i>Rabbit</i> Unit 13	ea /eaeae/ <i>Eagle</i> Unit 13
Sh /shsh/ <i>Sheep</i> Unit 14	Kk, -ck /k/ (not kuh) <i>Kangaroo</i> Unit 15	oo /ooo/ <i>Moon</i> Unit 16	ar /ar/ <i>Shark</i> Unit 17	Wh /wh/ <i>Whale</i> Unit 18	Ee /eee/ (short) <i>Engine or Ed</i> Unit 19
-y (-yyy) <i>Fly</i> Unit 20	ll /lll/ <i>Letter</i> Unit 21	Oo /ooo/ (short) <i>Otter</i> Unit 22	Bb /b/ (not buh) <i>Bat</i> Unit 23	all /all/ <i>Ball</i> Unit 23	Gg /g/ (not guh) <i>Gorilla</i> Unit 24
Ff /fff/ <i>Frog</i> Unit 25	Uu /uuu/ (short) <i>Umbrella</i> Unit 26	er /er/ (r-controlled) <i>Sister</i> Unit 27	oo /oo/ <i>Book</i> Unit 27	Yy /y-/ <i>Yarn</i> Unit 28	Aa /a/ (schwa) <i>Ago</i> Unit 28
Pp /p/ (not puh) <i>Pig</i> Unit 29	ay /ay/ <i>Hay</i> Unit 29	Vv /vv/ <i>Volcano</i> Unit 30	Qu /qu/ <i>Quake</i> Unit 31	Jj /j/ (not juh) <i>Jaguar</i> Unit 32	Xx /ksss/ <i>Fox</i> Unit 33
or /or/ (r-controlled) <i>Horn</i> Unit 33	Zz /zzz/ <i>Zebra</i> Unit 34	a_e /a_e/ (long, bossy E) <i>Cake</i> Unit 34	-y /-y/ <i>Baby</i> Unit 35	i_e /i_e/ (long, bossy E) <i>Kite</i> Unit 35	ou /ou/ <i>Cloud</i> Unit 36
ow /ow/ <i>Cow</i> Unit 36	Ch /ch/ <i>Chicken</i> Unit 37	ai /ai/ (long) <i>Rain</i> Unit 37	igh /igh/ (long) <i>Flight</i> Unit 38	o_e /o_e/ (long, bossy E) <i>Bone</i> Unit 38	ir /ir/ (r-controlled) <i>Bird</i> Unit 38

Sprick, M., Howard, L., Fidanque, A. & Jones, S.V. (2007). *Read Well I* (2nd ed.). Boston, MA: Sopris West.

Creating a Successful Working Environment

Creating a positive home reading environment is an important factor in helping your child develop the skills necessary to become a successful reader. Below are four suggestions for creating an environment that will encourage and support reading in your home.

- ✓ Select a place
 - Work with your child to identify a place in the house where you will work on reading at least 5 times each week.
 - Choose a place that is free from distractions (e.g., television, a sibling playing, family pet)
 - **What are some places that may work for this?** _____

- ✓ Establish a regular routine
 - Pick a time each day that you will work with your child on reading for approximately 20-30 minutes
 - Protect this time to the best of your ability, try not to let anything interfere or detract from this important time of day. If something comes up, try to make this missed time up at another convenient time.
 - **When are some times that you can dedicate to reading each day?** _____

- ✓ Establish expectations
 - Let your child know exactly what you want him or her to do during reading time (e.g., "I want you to sit calmly in your chair. I want you to try your hardest. I want you to listen carefully when I am reading to you.")
 - **What are some expectations you might choose for your child?** _____

 - When you begin each reading session, tell your child what you are going to be doing that day (e.g., "Today I am going to listen to you read from your chapter book for 20 minutes." Or "Today we are going to finish your reading homework from school, then you can pick any book you want and I will read it to you.")

- ✓ Motivate and encourage your child
 - Provide a lot of positive feedback during reading time.
 - Acknowledge when your child has mastered a word, sound combination, or other skill that was difficult in the past.
 - Use the point chart provided and award points for good reading, effort, and a positive attitude.
 - Tell your child that once they have filled up their point chart, they can exchange it at the CTL Reading Clinic for a prize out of the Treasure Chest.

Correcting Errors

- ✓ When listening to your child read, it is important that you provide immediate corrective feedback each time an error is made.
- ✓ Errors include:
 - Mispronouncing a sound or word
 - Examples:
 - Reading *where* when the word on the page is actually *were*
 - Saying the sound /o/ when the sound on the page is /oo/
 - Skipping a sound or word
 - Examples:
 - The sentence reads “He sat in the back” but the child reads “He sat in back”
 - When reading a row of sounds, one sound is skipped
 - Substituting a different sound or word for what is actually on the page
 - Examples:
 - Reading *mom* when the word on the page is *mother*
 - Reading *home* when the word on the page is *house*
 - Inserting a word
 - Example:
 - Saying any word while reading a sentence that is not printed on the page

Error Correction Procedures

Sounds:

- ✓ If your child makes an error when saying sounds in isolation, immediately provide the following 2-step error correction:
 1. “That sound is /shshsh/, what sound?” (/shshsh/)
 2. “Yes, /shshsh/, nice work! “

Regular Words in Isolation:

- ✓ If your child makes an error when reading regular words in isolation (i.e., from a word list rather than book), immediately provide the following 2-step error correction:
 1. “That word is *shoot*, what word?” (*shoot*)
 2. “Great! “

Irregular (Tricky) Words in Isolation:

- ✓ If your child makes an error when reading irregular/tricky words in isolation (i.e., from a word list rather than book), immediately provide the following 2-step error correction:
 1. “That word is *because*, what word?” (*because*)
 2. “Yes, *because*. Excellent!”

Words in Text:

- ✓ If your child makes an error when reading connected text (i.e., sentences, stories, passages) immediately provide the following 2-step error correction:
 1. “That word is *swoosh*, what word?” (*swoosh*)
 2. “Yes, *swoosh*, nice job!”

Make Reading Time a Positive Experience

- ✓ Prevent problems from occurring:
 - Establish your expectations before starting the reading session
 - Begin each session with a clear explanation of what will be accomplished before your child is finished with the session
 - When reading time is approaching, let your child know with a series of advanced warnings so he or she isn't caught off guard when it's time to do work.
 - For example, say something like "We are going to get started with our reading work in 5 minutes."
 - Follow that up with a 2-minute reminder.
 - When it is time for reading, let your child know directly by saying something like "It is time for reading, let's go to our reading spot."

- ✓ Provide positive feedback when your child:
 - Comes directly to the designated reading area at the designated time without a reminder
 - Comes to the designated reading area after only 1 request
 - Completes a whole task (e.g., the sounds section of the take-home)
 - ✓ Even if errors were made, provide positive feedback for just getting through the task.
 - Gets a sound/word correct that has been missed in the past
 - Is putting a lot of effort into the work
 - Reads a whole paragraph with no errors (or very few)
 - Answers a comprehension question correctly

- ✓ Types of positive feedback:
 - Specific verbal praise
 - "I like how you got that tricky word *because* right on your first try today! Great job!"
 - "You came right over and got ready to work without me even having to ask you!"
 - Physical gestures
 - High-fives
 - Pats on the back
 - Points on the point chart

Using The Point Chart

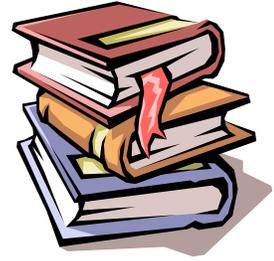
- ✓ Getting Started:
 - Before beginning the first home session:
 - Tell your child that you are going to be awarding points on a point chart
 - Show your child the point chart
 - Explain to your child that you will be marking 5 tally marks in each box on the point chart, and that when all the boxes are filled he/she will be able to exchange it for a prize from the CTL Reading Clinic Treasure Chest
 - Tell your child what can be done to earn points (e.g., trying really hard, reading words correctly)
 - Set a goal of awarding 15-20 points each day, which will work out to approximately 1 point per minute. This doesn't mean you have to literally give a point a minute, but you can give multiple points for certain things such as a really great job with a certain task.

- ✓ Using the Point Chart:
 - Award points strategically
 - *Before* your child begins one of the tasks on the take-home, tell him or her how many points can be earned. This can even be broken down to how many points per row of sounds can be earned.
 - Examples:
 - "I am going to give you 2 points if you can say all the sounds in this box correct the first time."
 - "You can earn 3 points for reading this first row of words without any mistakes! Good luck!"
 - Pair points with specific praise
 - When you are awarding points, tell your child exactly what he or she did to earn them.
 - Examples:
 - "You earned 2 points for saying all the sounds in that box correct the first time! Nice job!"
 - "I am giving you 4 points for getting that tricky word *because* right, it's not tricky for you anymore!"

The Point Chart

Point Chart

Name: _____



Resources

CTL Reading Clinic

<http://ctlreadingclinic.uoregon.edu/index.html>

Big Ideas in Beginning Reading

<http://reading.uoregon.edu/>

Reading Rockets

<http://www.readingrockets.org/>

Oregon Reading First

<http://oregonreadingfirst.uoregon.edu/>

Resource Room

<http://www.resourceroom.net/>

International Children's Digital Library

<http://en.childrenslibrary.org/>

National Reading Panel

<http://www.nationalreadingpanel.org/>

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