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## Effectiveness of a research-based reading development intervention in 2nd grade children

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EFFECTIVENESS OF A RESEARCH-BASED  
READING DEVELOPMENT INTERVENTION  
IN 2<sup>ND</sup> GRADE CHILDREN

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A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Child Development

---

by  
Kinsi Dawn Franzwa  
March 2011

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March 2011

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## ABSTRACT

A six-week reading intervention program consisting of reading instruction, phonics instruction, reading practice, activity centers, and a home component was implemented to examine the effectiveness of using a research-based reading intervention program compared to a traditional reading intervention program. Five children were in the intervention group; another 5 children (matched on grade and reading level) comprised the control group. All 10 children were given pre and post assessments consisting of the Basic Phonics Skills Test III (BPST III Shefelbine, 2006), phonemic awareness, SuperSpeed 1000 (Biffle, 2007), and the Developmental Reading Assessment (Beaver, 2006). Results showed that post-intervention scores for the intervention group were higher than those for the control group in all four areas. However, the control group made more growth on the BPST III than did the intervention group. Overall, the research-based reading intervention program did appear to be more effective in supporting reading growth compared to the reading program used with the control group. Results can be interpreted to show that reading intervention programs that are based on the most current research are more likely to be effective when helping struggling readers

learn how to become better readers. The current reading intervention program is based on the most current research. This demonstrates the importance of allowing teaching practices to conform to the most recent research, not just the most popular or most commonly used teaching methods or materials.

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## CHAPTER ONE

### INTRODUCTION

Reading is one of the most important skills in life because it impacts nearly everything a person does. When an individual wants to learn to drive, for example, they need to know how to read the street signs, the handbook, and the testing materials. When purchasing a home, leasing property, or applying for a credit card, an individual will need to know how to read the contract so that they can be informed when signing the paperwork.

Almost everything in daily life requires the ability to read. All of the reading skills necessary to become a successful reader are taught during the years between birth and about thirteen (Owens, 2008). If a child does not develop the reading skills necessary to become successful in an academic environment, that child will likely experience many frustrations over their lifetime such as failure in school and lowered self-esteem (Francis, 2006).

Because reading is so important, it is important to utilize the best instructional practices to teach reading. Unfortunately, there is no consensus as to what is the best way to teach reading. In fact, in the United States

the pendulum has swung back and forth between phonics-based reading instruction and "whole language" reading instruction. While there is published research on the effectiveness of phonics-based reading instruction (e.g., Flannigan, 2007; Kotaman, Tekin, & Tekin, 2007; Ouelette & Senechal, 2008; Snowling & Hulme, 2006; Sprugevica & Høien, 2003; Stahl & Kuhn, 1994) there is very little research on whole language reading instruction (e.g., Reutzel & Cooter, 1990; Stahl, McKenna, & Pagnucco, 1994; Traw, 1996). Research findings, however, are not always considered when choosing a method or developing a curriculum for reading instruction in classrooms. The purpose of the current project is to develop a reading development program for second grade children that is based on research.

Following is an introduction to how children learn to read, and the various biological and environmental factors that influence reading development (including methods of instruction). Reading development is a complex process impacted by a wide array of neurobiological, cognitive, social, and other related factors.

## How Children Learn To Read

Children typically go through four phases as they learn to read: pre-reading, initial reading/decoding, fluency, and reading to learn (Owens, 2008). During the first phase, i.e., pre-reading, children are learning the alphabet and copying the sounds that others make while they read. Towards this end of the phase, they are learning the sounds associated with the letters of the alphabet. This phase usually lasts from birth to age six. In the second phase, i.e., initial reading/decoding, children learn to blend consonants and vowels in simple words such as c-a-t and b-a-t. With guidance, children will eventually begin reading larger words. This phase usually lasts from age six to seven (during first and second grade), although some children may take longer than others before they are ready to advance to the next phase. In the third phase, i.e., fluency, children finally begin to view themselves as "real readers." They are better at reading and spelling, and are ready to read without having to sound out each word. This is called the "fluency" phase because children benefit greatly from rereading familiar books because this allows them to build fluency. This phase usually lasts from age seven to age eight (second and third grade). The final phase of reading development

in children is called the "reading to learn" phase. During this time children find it easy to sound out familiar words, and they read fluently because they have mastered the alphabetic code. In this phase, children are ready to begin to study subject matter by reading and using information text. This phase typically lasts from age nine to age thirteen (grades four through eight) (Owens, 2008). Learning to read is a complex process as indicated by the following research.

#### Reading Development: Biological Factors

There are a number of biological factors that influence reading development including the neurobiological processing of words, the heritability of lexical and nonlexical reading abilities, and various cognitive aspects of reading development. The biologically-based cognitive factors which influence reading (i.e., phonological awareness, speeded naming, and classification) play a very unique role in learning to read; if they do not develop properly, reading development will be delayed.

#### Neurobiological Processing of Words

When trying to read, the brain first detects visual features of words and attempts to identify the letters in

the word (Bates et al., 2004). From there, the information is processed via one of two routes: a lexical route (which allows one to read irregular words such as "yacht"), and a nonlexical route (which allows one to read nonwords such as "gop"). Regular words such as "stop" and "look" can be read using either of the two routes (Bates et al., 2004; Castles, Bates, Coltheart, Luciano, & Martin, 2006; Coltheart, 2006; Powell, Plaut, & Funnell, 2006). Finally, once a written word has been recognized and understood, the child can respond with spoken language (Stuart, 2006).

Because there are two "routes" that are used to decipher words when reading, the name "Dual Route Model" has been used to describe the mental information processing system of reading. All regular and irregular words that are contained in the orthographic lexicon (i.e., all of the words that constitute a given language) can be read by the lexical route. However, if a child encounters a nonword such as "gop," the lexical route will not be able to decipher this word because it is not in the orthographic lexicon (Coltheart, 2006; Stuart, 2006). The lexical route becomes more useful and effective as the child develops a larger sight vocabulary (i.e., a vocabulary consisting of all the words that a child can read without effort) (Bates et al., 2004).

Nonwords such as "gop" are read by the second route, the nonlexical route (Castles, Bates, Coltheart, Luciano, & Martin, 2006; Coltheart, 2006; Powell, Plaut, & Funnell, 2006). The nonlexical route uses graphophonemic correspondence (GPC) rules (i.e., the rules that govern which graphemes connect to which phonemes, e.g., "ph" makes the /f/ sound) and letter-sound application (the rules that govern which letter produces which sound, e.g., "s" makes the /s/ sound) to sound out words (Stuart, 2006). It involves recoding the graphemes of printed words into their corresponding phonemes using GPC rules (Stuart, 2006). This is a rule-based system so it cannot read the irregular words that the lexical route can decipher (e.g., yacht) because irregular words do not follow the GPC rules. The nonlexical route will try to regularize irregular words, thus yielding the incorrect pronunciation (Bates et al., 2004). The nonlexical route is capable of correctly deciphering all regular words and all nonwords as long as they follow the GPC rules that control this route of processing.

Neither of these routes is solely responsible for a child's ability to read aloud. Reading aloud is the product of a child's ability to recognize words by sight (lexical route) and the child's ability to apply



letter-sound correspondence rules (nonlexical route). More generally, reading aloud is the product of a child's ability to use both routes simultaneously (Coltheart, 2006)

Neurobiological evidence supports the Dual Route Model. Neuroimaging studies have found evidence of two different brain mechanisms that support reading (Simos, 2006). One mechanism assists in reading nonwords (i.e., yot) and depends on the activation of the left occipito-temporal regions of the brain, and the other mechanism assists in reading irregular words (i.e., yacht) and depends on the left frontal regions of the brain. This neuroimaging data is consistent with the Dual Route model of reading, which assumes there is one route that addresses the pronunciation of all words known to the reader (regular words and irregular words) and a second route that assembles pronunciations based on spelling-sound correspondences (i.e., graphophonemic correspondence or GPC) of nonwords (Proverbio, Vecchi, & Zani, 2004). In fact, neuroimaging has provided evidence that the first stages of visual word recognition activate a visual word finder located in the left extrastriate cortex of the brain (Proverbio, Vecchi, & Zani, 2004). These images show that when a typically-developing reader

is reading, there is an increased level of activity in the left hemisphere of the brain. Conversely, when a struggling reader (or a child with a reading delay such as dyslexia) is attempting to read, there is a lack of activity in the left hemisphere of the brain and instead an increased level of activity in the right hemisphere of the brain (Simos et al., 2002). From this, it is clear that in order for a child to become a successful reader, the left hemisphere of the brain must be activated while reading because this is where the two mechanisms of the mental information processing system are located neurologically (Coltheart, 2006).

#### Heritability of Lexical and Nonlexical Reading

Individual differences in reading abilities are strongly heritable (Harlaar, Dale, & Plomin, 2007). In fact, data from behavioral genetics studies in the United States indicate that at least half of the variance in reading ability is genetic (Bates et al., 2004; Castles, Bates, Coltheart, Luciano, & Martin, 2006) and that it remains fairly stable during the elementary school years (Harlaar, Dale, & Plomin, 2007). Lexical reading (i.e., the reading of regular and irregular words such as "cat" or "yacht" respectively) and non-lexical reading (i.e., the reading of regular and nonwords such as "cat" and

"gop" respectively) are heavily attributed to genetic influences (Castles, Bates, Coltheart, Luciano, & Martin, 2006). It appears that some genes influence only the ability to acquire nonlexical reading skills (i.e., the ability to read regular words and nonwords such as "cat" and "gop" respectively) while others influence the ability to acquire lexical reading skills (i.e., the ability to read all regular and irregular words such as "cat" and "yacht" respectively) (Castles, Bates, Coltheart, Luciano, & Martin, 2006).

Dyslexia is a developmental reading disorder in which children demonstrate phonological deficits either in the lexical route or in the non-lexical route of learning to read (Simos et al., 2002). There are two main types of dyslexia: Surface Dyslexia and Phonological Dyslexia. Surface Dyslexia develops when a child does not develop full use of the lexical route, and therefore struggles with reading irregular words (Castles, Bates, Coltheart, Luciano, & Martin, 2006). These children are described as being proficient in small unit learning (phonemes), but poor in large unit learning (entire words): this can be demonstrated in that they struggle more with irregular words rather than nonwords like "yot" or "gop" which they easily sound out (Seymour & Duncan, 1997). Phonological

Dyslexia, by contrast, develops when a child does not develop full use of the nonlexical route and therefore struggles with reading nonwords (Castles, Bates, Coltheart, Luciano, & Martin, 2006). These children are proficient in large unit learning (i.e., entire words) but do poorly in small unit learning (i.e., phonemes); this can be demonstrated in that they struggle more with nonwords rather than irregular words like "yacht" or "kind" which they can easily identify by sight (Seymour & Duncan, 1997).

The difference between these two types of reading impairments can be explained in terms of different degrees of a phonological impairment, combined with a lack of exposure to print in some cases. Specifically, phonological dyslexics suffer from a severe phonological language deficit, which impairs their ability to learn letter-sound correspondence and a relatively small environmental influence. Whereas surface dyslexics are proposed to suffer from the same phonological deficit, but in a much milder form, and this phonological deficit is made worse by a lack of exposure to print (Castles, Bates, Coltheart, Luciano, & Martin, 2006). Although both phonological skills and print exposure are said to influence the acquisition of lexical and nonlexical

reading routes (i.e., in the Dual Route Model), and to be implicated when they fail to develop in different types of Dyslexia, the behavior-genetics data shows that an additional factor needs to be identified before acquisition of lexical skills, and thus the basis of Surface Dyslexia, can be fully explained (Castles, Bates, Coltheart, Luciano, & Martin, 2006).

Interestingly, children who suffer from Surface or Phonological Dyslexia also show unique brain activation patterns. The left-hemisphere superior temporal region is where phonological processing (i.e., converting print into sound) typically takes place. However, a child with dyslexia shows a lack of activation in this part of the brain and instead shows increased activation in the right-hemisphere superior temporal region (Simos et al., 2002). Given this, it is not surprising that a child with this brain pattern would have such phonological deficits (Snowling & Hulme, 2006).

#### Cognitive Influences on Reading Development

There appear to be several biologically- based cognitive predictors of reading development, including phonological awareness (i.e., the awareness of the sound structure of language), speeded naming (i.e., the ability to name words and objects as quickly as possible), and the

ability to classify information in more than one way (Mason, 2001; McBride-Change & Kail, 2002).

Phonological awareness is a skill that is vital to reading, and it appears to be biologically- based in the left hemisphere of the brain (Simos et al., 2002; Proverbio, Vecchi, & Zani, 2004). Phonological awareness and speeded naming are often tested at the same time due to the fact that they are both considered phonological processing skills. Phonological awareness and speeded naming appear to predict unique variance in initial reading acquisition (McBride-Change & Kail, 2002). Of the two, phonological awareness (i.e., the awareness of and access to the sound structure of language) appears to be the strongest predictor of reading development (McBride-Change & Kail, 2002).

Classification refers to the ability to shift perspective or classify information in more than one way, and has been shown to influence word recognition. This typically develops at the same time a child is developing beginning reading skills (Mason, 2001). Researchers have found support for a genetic influence on the development of classification ability by using a Piagetian Mathematical Concepts Battery (PMCB), which assesses various cognitive tasks including classification. Results

show that forty-nine percent of the variance in PMCB performance was accounted for by genetic variance (Garfinkle, 1982).

Once a child becomes proficient in classification ability, they will be able to recognize the word "stop" in a stop sign as the same word that appears in a sentence and is different from the word step (Mason, 2001). For example, in a study of preschool-aged children who were tested on their ability to complete a classification task and their reading ability, a child's ability to successfully demonstrate classification was significantly related to both their ability to successfully name all twenty-six letters in the alphabet and their ability to recognize words they had been taught two weeks prior (Mason, 2001).

#### Reading Development: Environmental Factors

There are a number of environmental factors that influence reading development including those that take place in the home and those that take place at school. Home-related factors include print resources, time spent reading with the child, attachment, and socioeconomic status. School-related factors include self-esteem, the

impact of reading volunteers in the classroom, and the method of reading instruction.

#### Home-Related Influences

There are several key factors that influence reading development in the home of nearly every early reader: availability of printed materials in the home, time spent reading to the child, the quality of the parent-child relationship, and socioeconomic status of the home.

Print Resources, Reading Encouragement, and Text Interest in the Home. The number of books a child has in the home, whether children feel encouraged to read, and the child's level of interest in the content of the print resources all influence reading development.

The number of books a child owns or brings home and how often a child has time alone with books are significantly associated with the expressive vocabulary and phonological awareness skills of children whose mothers are average-ability readers (Johnson, Martin, Brooks-Gunn, & Petrill, 2008). Additionally, the fewer books that a child has available to them in the home; the more likely they are to develop reading problems (Olofsson & Niedersoe, 1999). In fact, if print resources are available in the home, the child is more likely to develop a strong sight vocabulary which will make it less likely



that the child will develop Surface Dyslexia (i.e., a delay in reading regular and irregular words such as "cat" and "yacht" respectively) (Castles, Bates, Coltheart, Luciano, & Martin, 2006).

Providing reading encouragement for a child can help him advance in his reading ability. Children need to be encouraged to read materials that are challenging to them. Too often young children become turned off from reading at an early age because they are made aware of all they cannot do rather than the very real progress they have made (Freeman, 2001). In fact, encouragement has such a powerful effect on children's reading development that some children, who think they cannot read particular text, when encouraged, are able to read it. This suggests that we are holding children back by giving them text that is easy, when in fact, when left on their own with some encouragement; they will try a more difficult text if they think that it is worth reading (Benerji, Chavan, & Rane, 2005).

Regardless of age, readers place a large emphasis on the content of the text and the level of interest they have in that particular text (Boggs, 2005). Therefore, if the text is not considered interesting or appealing, the reader is not going to make the effort to read it (Boggs,

2005). Similarly, if children are not interested in the text, or if they become bored with a particular type of text (i.e., books vs. magazines), there will be no desire to read it (Benerji, Chavan, & Rane, 2005). This is why it is vital to have multiple sources of text in the home such as books, newspapers, comics, and magazines (Benerji, Chavan, & Rane, 2005; Boggs, 2000).

Time Spent Reading to Children. Shared parent-child reading is significantly related to a child's performance in school including vocabulary development and their overall academic performance.

A home learning environment that is rich with reading experiences, stimulating, and academically supportive is one of the strongest predictors of reading success in first grade (Downer & Pianta, 2006). A child's vocabulary upon entering school is the main predictor of school success or failure, and this develops as a child reads more and more books (Griffiths, VanDerHayden, Skokut, & Lilles, 2009). Parents of children who demonstrate a delay in vocabulary development are significantly less likely to participate in activities such as book reading, teaching of print through pointing out print in the environment, and teaching the letters of the alphabet when compared to parents of children who do not demonstrate a delay in

vocabulary development (Boudreau, 2005). Also, parents of children who are not delayed in vocabulary development are significantly more likely to have started reading to their children at a much earlier age than parents of vocabulary-delayed children (Boudreau, 2005).

Children's overall reading performance is also strongly influenced by their parent reading with them (Kelly-Vance & Schreck, 2002). When parents increase the amount of time spent reading with their child at home, children significantly increase their reading rate and accuracy, and develop positive attitudes towards reading (Kelly-Vance & Schreck, 2002). Clearly, the more reading a child does at home (preferably with a parent), the better reader they will become (Kelly-Vance & Schreck, 2002). For example, research clearly shows that this type of parent involvement (i.e., reading with your child) has a positive effect on a child's reading acquisition, especially from kindergarten to grade three (Darling & Westberg, 2004).

Most research is conducted using mother-child dyads; when a father is involved in a child's reading development, he is most likely to participate in school-related reading (which will equally impact the child's overall academic performance), and that child is

more likely to achieve higher test scores, better attendance, and stronger cognitive skills (Ortiz, 2000).

Parent-Child Relationship Quality: Attachment. There are several ways in which attachment status influences reading development. Securely attached children tend to pay more attention to reading instruction and are therefore easier to instruct (Bus & Ijzendoorn, 1988a; Bus & Ijzendoorn, 1988b; Bus & Ijzendoorn, 1992). In securely attached parent-child dyads, there is less need to discipline and the children are less distracted than in anxiously attached dyads. In fact, mothers whose relationship to their child is less secure spend less time reading and more time troubleshooting behavior problems (Bus & Ijzendoorn, 1988a).

Securely attached children show more interest in written material than do insecurely attached children. They also show more exploratory manipulation with written material than anxiously attached children (Bus & Ijzendoorn, 1988a). This is likely due to the fact that securely attached children are able to consider their caregiver as a base from which to explore their environment. Without that secure base, the child is less likely to explore their own interests such as reading materials and books (Bus & Ijzendoorn, 1988a).

Finally, mothers who have a secure relationship with their child read more frequently to their child than do mothers who have an insecure relationship with their child (Bus & Ijzendoorn, 1992). Also, children who score high on emergent literacy tests tend to be securely attached children who pay more attention to reading and get more reading instruction from their mothers (Bus & Ijzendoorn, 1988a). Clearly, if the child is securely attached to their mother (or caregiver), they are more likely to develop a better sight word vocabulary because they are read to more often and therefore are less likely to develop Surface Dyslexia (Castles, Bates, Coltheart, Luciano, & Martin, 2006). Conversely, children with reading difficulties report lower attachment to both parents than those without reading difficulties, (Undheim & Sund, 2008).

Socioeconomic Status (SES). There are numerous ways in which socioeconomic status (SES) influences reading development, including the number of words children are exposed to (i.e., vocabulary development), the number of print resources available in the home, and the amount of time parents spend reading to their children.

Vocabulary development is heavily dependent on the SES of the family in which the child is raised (Hoff,

2003). The productive vocabulary of children from high SES households grows more and grows faster than the vocabulary development of children from middle and low SES households (Hoff, 2003). Furthermore, toddlers from low SES households have been reported to perform significantly poorer than toddlers from middle and high SES households on standardized receptive and expressive vocabulary tests and on the number of different words used in spontaneous speech (Horton-Ikard & Weismer, 2007). Hart and Risley (2003) found, for example, that by the age of three years high SES children (i.e., parents are in professional occupations) are using almost twelve-hundred vocabulary words in their speech; middle SES children are using seven-hundred vocabulary words in their speech, and the low SES children are using only about four-hundred vocabulary words in their speech. In addition, by the time the child is four years old it is estimated that a child in a high SES family will hear approximately forty-five million words, a child in a middle SES (i.e., working class) family will hear approximately twenty-six million words, and a child in a low SES (i.e., poverty) family will only hear approximately thirteen million words. That is a difference of over thirty-million words heard between a high SES child and a low SES child (thus, thirty million

words that the low SES child will be unable to incorporate into their own vocabulary in both speech and reading) before the child ever enters kindergarten. In an earlier study, Hart and Risley (1992) found that the quality of the parent's speech to their children is strongly related to the family's existing SES level. In lower SES families a substantial portion of parental speech to the children was used to prohibit the children's activities. Children who have professional parents hear many more questions and more frequent repetitions and elaborations of their topics thus increasing speech vocabulary (which will in turn increase reading vocabulary) (Hart & Risley, 1992).

In homes of low socioeconomic status (SES) families, print resources are far less likely to be present and available to the children. For example, when looking at six different communities (Brentwood, Beverly Hills, South Central Los Angeles, Watts, Compton, and East Los Angeles) Constantino (2005) found that the average low SES household had an average of only six print resources in the home available to the children, whereas the average high SES household had an average of four-hundred and fourteen print resources available to the children. Because books are often not available in the homes of low SES children, these children are more likely to develop

poor receptive language skills and much weaker vocabularies (Hoff, 2003).

Parents with higher family incomes are more likely to spend more time reading to their children than mothers with lower family incomes (Karrass, VanDeventer, & Braungart-Rieker, 2003). Children whose parents read to them more frequently at home are more likely to experience reading success. Although SES is a strong predictor of reading success, the amount of time a parent spends reading to a child prior to school entry can offset the negative effects of growing up in a low SES family (Ortiz, 2000). For example, after collecting data on eighty-four low SES children participating in the Questioning, Understanding, Enriching, Seeking, and Thinking (QUEST) program for gifted or academically successful children, Baily (2006) found that the frequency with which low SES parents read to their QUEST children was statistically significant in influencing their children's reading grades upon entering school. Although it is true that if a child is read to they are more likely to become a successful reader regardless of socio-economic status (Ortiz, 2000), it is equally true that children from low SES families are less likely to be read to and are therefore more at risk for weak reading development. It has been shown that



shared reading is more likely to happen in families of middle to high socio-economic status than low socio-economic status and in families where the parents are older (over twenty-five) as opposed to younger (Celano, Hazzard, McFadden-Garden, & Swaby-Ellis, 1998).

When a parent takes the time to be involved in the child's education, e.g., helping with homework and reading with the child, socioeconomic status disappears as an academic achievement factor (Ortiz, 2000). Typically, children of professional or managerial parents are far more likely to meet the basic performance standards compared with children of unskilled manual working parents (Ortiz, 2000; Torr, 2008). For example, in a study of print inventory of homes, classrooms, and libraries in three communities (Beverly Hills, Watts, & Compton) it was found that high reading scores in Beverly Hills sent ninety-three percent of its high school students to college, while relatively few go to college from Watts and Compton. Additionally, in 1999, Compton's state-appointed administrator reported that barely one in ten students was even performing at grade level (Kimball, 2000). However, when parents intervene in low socioeconomic households and begin reading with their children, socioeconomic status

does not have its typical effect on a child's reading development (Ortiz, 2000).

### School Related Influences

In addition to the method of reading instruction that the teacher implements in the classroom, research has shown that schools also impact a child's reading development by affecting the child's self-concept. In addition, the presence of school volunteers who read to children also impact a child's reading development.

Impact on Self-Concept. There are immediate consequences of early reading failure on a child's self-concept, attitudes towards school, and peer relations. Some feel that public schools are designed in a way that promotes success in females more so than males (e.g., Francis, 2006). For example, poor male readers' suffer negative social consequences (such as ridicule by peers) while few social benefits occur for good male readers (such as praise by peers and teachers). In contrast, social benefits do occur for good female readers (such as public praise by both teachers and peers) but negative consequences are not suffered as frequently by poor female readers (such as ridicule by peers). Additionally, when a child perceives themselves as a poor reader, they begin to view the educational system more

negatively which in turn causes them to want to be even less involved, try less, and blame the setting for their failure (Mayya & Roff, 2004). These consequences of failure in the classroom on the child's self-esteem and self-concept perpetuate patterns of success for females and failure for males over the course of the child's entire educational career (Francis, 2006; Glick, 1972).

School Volunteers. There are two main areas in which school volunteers (e.g., parents and community members) influence reading development.

First, when volunteers are present in the classroom, children are more likely to attend school and are therefore more likely to become successful readers. For example, Volkmann and Bye (2006) conducted a study on students in an elementary school where each child was paired with a volunteer adult reading partner to assess whether attendance improved during the year the reading program was implemented. Findings from the study showed no difference in the average number of days students were absent from school, but students were more likely to attend school on days when they were scheduled to meet with their volunteer reading partner (Volkmann & Bye, 2006). The mere presence of these volunteers aided in reading development for these children because their

presence brought the children to school and research shows that the more consistently a child attends school, the more likely they are to develop strong reading skills (Chatterji, 2006).

Additionally, research shows that children enjoy having volunteers in their classrooms (Williams, Thorogood, & Jones, 2002). Many teachers believe that the burden of the adult to child ratio is lightened by school volunteers (Torgerson, King, & Sowden, 2002; Volkmann & Bye, 2006). Children especially enjoy the extra attention they are being given and the opportunity to ask extra questions and to be given a quick response (Williams, Thorogood, & Jones, 2002). Some children feel that the presence of the volunteer in their classroom allows them to make more progress (Williams, Thorogood, & Jones, 2002). In fact, when a child feels encouraged and believes that he can do something, he is more likely to succeed in that task (Benerji, Chavan, & Rane, 2005). One child summed it up: "I like it better when I work with Alice (volunteer) because I can ask more questions and make sure I'm getting it right. I do the work better and get more done" (Williams, Thorogood, & Jones, 2002, p. 374). Overall, the research does not show that the volunteers themselves help the child to perform better in reading;

however, their presence does encourage the child to attend school and create an environment where the children feel empowered which aids in the development of reading skills (Chatterji, 2006; Benerji, Chavan, & Rane, 2005).

Methods of Instruction. The method of reading instruction that is used by a child's teacher is going to have an impact on how that child learns to read. There are two different schools of thought of reading instruction: phonics instruction and whole language instruction. Over the course of history, the preferred method of instruction has fluctuated between phonics instruction (which is a set of practices that are implemented into a classroom) and whole language instruction (which is a philosophy adopted by educators) and these practices and pendulum swings have not always been guided by research. To this day, there has been very little research done on the effectiveness of whole language instruction, while a wealth of research has been conducted on the effectiveness of phonics instruction.

Over the last fifty years of reading instruction in the United States there has been much controversy as to which method of reading instruction is most effective. After twenty years of phonics instruction being used as the primary method of reading instruction (from 1950 until

1970), whole language came to dominate journals, conference agendas, workshops, course offerings, and even classroom reading textbook design and marketing strategies and it remained that way for almost twenty years (Adams, 1994). However, beginning in the late 1990s a large amount of instruction was implemented to increase phonemic awareness and more phonics-based instruction was encouraged similar to education prior to the 1970s (Pressley, 1994). Currently, the question is not if educators should use phonics instruction, but how educators should use phonics instruction. Similar to previous years, there continues to be a lack of research demonstrating exactly what the best method of reading instruction is. Unfortunately, in many cases, the research that is being done is not being used to guide the practices in the classroom. Research shows that the emphasis needs to be on strategically designing a balanced approach to reading instruction which incorporates the benefits of both whole language and phonics instruction being used together (Fielding-Barnsley & Purdie, 2005).

Phonics Instruction. Phonics instruction is a generic term used for any reading method that teaches a relationship between letters and phonemes (Kotaman, Tekin, & Tekin, 2007). It places a lot of emphasis on the

individual components of words and involves teaching children how to connect sounds to groups of letters. Phonics, by definition, involves the direct teaching of letter sounds so that children can get used to decoding words that are not recognized automatically by sight (Vellutino, 1991). The goal of phonics instruction is to aid in reading development so that it becomes an automatized process that does not need any contextual information to be done successfully.

There are multiple components of phonics instruction: grapheme-phoneme correspondence (GPC), segmentation of whole words into their correct phonemes and graphemes (Stuart, 2006), and deciphering the alphabetic code (Sears, 1999).

Grapheme-phoneme correspondence (GPC) is vital in learning to read: it refers to the understanding that phonemes in each word directly relate to the graphemes in that word written down (Ehri, 2005). This ability will allow a child to blend phonemes into the correct pronunciation of a word (Sears, 1999). A phoneme is the smallest unit comprising spoken language (Ehri et al., 2001). Phonemes combine to form words and syllables (the English language consists of about 41 phonemes). For example, a few words have only one phoneme, such as "a" or

"oh." Most words consist of a blend of phonemes, e.g., "go" with two phonemes, "check" with three phonemes, or "stop" with four phonemes. The same phoneme may be spelled more than one way, and the same letter may stand for more than one phoneme (Ehri, 2005). If a reader does not know short vowels, or if they do not know that *ph* symbolizes /f/, then when they encounter these letters in particular words, the letters are not likely to become bonded to the correct phonemes in their memory. Graphemes, by contrast, are small units of written language that represent phonemes in the spelling of words. Although graphemes play a smaller part in learning to read (they are quite vital for spelling), they are the "flip side" of learning phonemes in that they are literally phonemes written down. Graphemes may consist of one letter, for example, P, T, K, A, N or multiple letters, CH, SH, TH, CK, EA, IGH, each symbolizing one phoneme (Ehri et al., 2001). Knowledge of these graphophonemic relationships must be learned through either explicit instruction or implicit learning and practiced before the bonding of the graphemes and the phonemes in the brain can occur (Ehri et al., 2001).

Segmenting whole words into their correct phonemes and graphemes is vital in learning how to spell. This ability allows a child to attach spoken phonemes to



written graphemes and to therefore spell words correctly (Adams, 1994). It is vital to be able to hear the separate sounds in words and then be able to understand how the spellings of written words make those sounds (Adams, 1994). These two components work in a reciprocal fashion in that they turn printed text into a spoken word (i.e., reading) and also turn a spoken word into printed text (i.e., spelling).

"Deciphering the code" refers to gaining an understanding of the English alphabet, and many researchers have found that learning to read requires "cracking" the alphabetic code (Goswami, 2005; Lervag, Braten, & Hulme, 2009; McBride-Change & Kail, 2002). When learning the English alphabet, the letter names are typically learned first, followed by corresponding letter sounds (Stuart, 2006). Learning letter names is thought to be fairly straight forward with the exception of some letter confusion with four letters: "b," "d," "p," and "q" because the letters change when rotated on either a vertical or horizontal axis (Hampenstall, 1997). Most letter names (all but W and Y) contain sounds in the name that can be used to determine the sounds it makes (Ehri & Wilce, 1987). Letter sounds are learned more easily if they contain the initial sound of the letter name (B- /b/,

T- /t/) than if they contain the final sound of the letter name (F- /eff/, S- /ess/). Because of this, children will often name the letter /d/ for the sound of the letter W, /w/ as the sound for the letter Y, and /e/ for the sound of the letters F, L, M, N, and S (Stuart, 2006).

Letter knowledge at school entry is one of the best predictors of reading at the end of the first year of school (Hulme, Snowling, Caravolas, & Carroll, 2005; Lervag, Braten, & Hulme, 2009; Ouellette & Sénéchal, 2008; Snowling & Hulme, 2006; Stuart, 2006). Once a child understands the basic "code" (i.e., the English alphabet), they can use their knowledge of their spoken language to aid in the reading process (Goldin-Meadow & Mayberry, 2001). This means that the child needs to learn how to turn printed letters (i.e., graphemes) into sounds (i.e., phonemes) of recognizable spoken words (Hulme, Snowling, Caravolas, & Carroll, 2005). Sound-symbol correspondence is very influential in moving the beginning reader toward skillful reading, even in whole language classrooms (Sears, 1999; Stahl & Kuhn, 1995). In fact, one of the strongest predictors of reading achievement is familiarity with the alphabetic code (Share, Jorm, Maclean, & Matthews, 1984).

Phonics instruction provides explicit instruction in skills that are required for reading (i.e., phonemes, graphemes, letter sounds, and the alphabetic code) so that children can begin to understand these relationships and become successful readers (Stahl & Kuhn, 1995). Children typically begin to benefit from phonics instruction (i.e., letter sounds and grapheme-phoneme connections) as early as five years old; however, this instruction needs to be done in a structured and fun way. Stuart (2006) states that the way phonics instruction is delivered will affect the amount of learning that takes place. Most children at risk of reading failure can be taught to read as long as the appropriate instruction is given (i.e., phonics) and delivered in the appropriate way (i.e., structured, fun, and upbeat) (Fielding-Barnsley & Purdie, 2005). Phonics instruction is especially beneficial for children who learn easier when material is presented to them in small parts and then later in larger parts (these children are commonly referred to as "part to whole learners"). This is because phonics instruction begins with the smallest units of language (i.e., phonemes) and continues to provide instruction one piece at a time until the child can connect those phonemes to the corresponding graphemes, read entire words, and finally read whole paragraphs

(Seymour & Duncan, 1997; Stahl & Kuhn, 1995). For example, phonics instruction is such a powerful method of reading instruction that when Kotaman, Tekin, and Tekin (2007) conducted in-depth interviews with Turkish first grade teachers who had just been told to switch from whole language instruction to phonics instruction, they found that of the fifty-plus children each teacher had in each class, only three children did not learn to read by the end of their first grade year. This does not typically happen until the third grade.

In the remainder of this section the main components of phonics instruction will be discussed: the similarities and often overlooked differences between phonological awareness and phonemic awareness, deep and shallow orthographies and their influence on reading development, the importance of spelling and invented spelling, the phases of sight word development, and finally, the concept of word in text. These components are vital in understanding why and how phonics instruction is effective.

Phonological Awareness. Phonological awareness refers to a child's awareness of and ability to vocalize phonemes and recognize the order of phonemes in daily conversations (Flanigan, 2007; Turan & Gul, 2008). Phonological

awareness helps children who are in the early stages of learning to read "sound out" words they recognize orally but do not yet recognize in print (Goldin-Meadow & Mayberry, 2001). Phonological awareness correlates with early reading achievement and plays a causal role in learning how to read (Adams, 1993; Ehri et al., 2001; Flanigan, 2007; Hampenstall, 1997; Hulme, Snowling, Caravolas, & Carroll, 2005; Sears, 1999; Sprugevica & Høien, 2003; Turan & Gul 2008).

Phonological awareness skills begin to develop during the preschool years. There is an order in which children develop phonological awareness skills (Seymour & Duncan, 1997; Turan & Gul, 2008): first, children develop rhyme skills (i.e., words that have the same ending sounds), then basic consonant vowel consonant (CVC) spelling skills (cat or dog) (Turan & Gul, 2008). Before they can spell longer/non-CVC words, children begin to develop the ability to count the number of sounds in a word (Turan & Gul, 2008). At this point they develop advanced spelling skills which require graphophonemic correspondence such as consonant-consonant-vowel-consonant (i.e., that), consonant-vowel-consonant-consonant (i.e., lamp), or consonant-consonant-vowel-consonant-consonant (i.e., thump) (Penney, Drover, Dyke, & Squires, 2006). Finally, a

child can begin to manipulate the sounds in a word such as deleting /c/ (the onset or first sound) and pronouncing a new word i.e., "at" instead of "cat" which is typically mastered by the time a child is reading at a third grade level (Penney, Drover, Dyke, & Squires, 2006).

Phonological awareness develops over a period of time along with increasing mastery of the alphabetic code, and because of this, phonological awareness and the acquisition of literacy have a reciprocal relationship (Fielding-Barnsley & Purdie, 2005; Flanigan, 2007; Penney, Drover, Dyke, & Squires, 2006). Some phonological skills emerge prior to being able to read and may be a prerequisite to literacy, while others develop as literacy develops.

Phonemic Awareness. Phonemic awareness is one part of the phonological awareness: it refers to the ability to segment words into phonemes and to blend phonemes to form words (Ehri et al., 2001; Ehri & Wilce, 1987; Flannigan, 2007; Pressley, 1994; Sprugevica & Høien, 2003; Stahl & Kuhn, 1994). This ability is particularly critical and has been shown to play a causal role in learning to read (Ehri et al., 2001; Ehri & Wilce, 1987; Hulme, Snowling, Caravolas, & Carroll, 2005; Lervag, Braten, & Hulme, 2009). Phonemic awareness is said to be one of the best

predictors of early reading ability (Flanigan, 2007; Lervag, Braten, & Hulme, 2009; Pressley, 1994; Sprugevica & Høien, 2003; Stuart, 2006). Phonological awareness (in contrast to phonemic awareness) is a more encompassing term that refers not only to phonemic awareness but also to the awareness of larger pieces of speech such as syllables and rhyming words (Ehri et al., 2001).

Providing phonemic awareness instruction to children with no measurable reading skills and very limited letter knowledge does produce reliable (yet small) effects on later reading skills (Hulme, Snowling, Caravolas, & Carroll, 2005). Preexisting literacy skills also contribute to phonemic awareness development (Penney, Drover, Dyke, & Squires, 2006). Phonemic awareness, although extremely vital, is only one part of a multicausal system that is critical for reading development (Hulme, Snowling, Caravolas, & Carroll, 2005) and phonemic awareness instruction can be enhanced when combined with additional skills instruction such as graphophonemic correspondence, deciphering the alphabetic code, and letter knowledge (Ehri et al., 2001; Flanigan, 2007; Stuart, 2006; Vellutino, 1995).

Phonemic awareness instruction has been shown to be effective with children who demonstrate reading

difficulties (Snowling & Hulme, 2006). In fact, not providing phonemic awareness instruction to a child who lacks such awareness increases that child's risk for long-term reading difficulties (Stahl & Kuhn, 1994; Pressley, 1994). Children who are commonly referred to as part-to-whole learners (i.e., children who learn easier when material is presented to them in small parts, i.e., phonemes, and then later in larger parts, i.e., whole words) are dependent on phonemic awareness instruction; without it they are likely to develop reading problems. Children with reading difficulties tend to read less, read less challenging texts, and are treated differently by their teachers as they learn to read (Stahl & Kuhn, 1994). As a result, these children continue to fall further and further behind: what might have begun as difficulty in phonemic awareness becomes compounded through the effects of the child's initial failure. Phonemic awareness instruction is also helpful for disabled readers, preschoolers, kindergarteners, and grade school children (Ehri et al., 2001).

There are six tasks that are generally used in teaching phonemic awareness skills, and they are generally acquired in this order: phoneme isolation, phoneme identity, phoneme categorization, phoneme blending,



phoneme deletion, and phoneme segmentation (Ehri et al., 2001). These tasks involve the child performing explicit manipulations on, or judgments about, the sound structure of spoken words (Hulme, Snowling, Caravolas, & Carroll, 2005). First, in phoneme isolation, a child is taught to recognize individual sounds in words. For example, "Tell me the first sound in *paste*" /p/. Second, in phoneme identity, a child is taught the common sounds in different words, e.g., "Tell me the sound that is the same in *bike*, *boy*, and *bell*" /b/. Third, in phoneme categorization, a child is taught to recognize the word with the odd sound in a sequence of three or more words, e.g., "Which word does not belong? *Bus*, *bun*, *rug*" (*rug*). Fourth, in phoneme blending, a child is taught to listen to a sequence of separately spoken sounds and blend them to form a recognizable word, e.g., what word is /s/ /k/ /u/ /l/? (*school*). Fifth, in phoneme deletion, a child is taught how to identify what word remains when a specified phoneme is removed, e.g., "What is *smile* without the /s/? (*mile*). Finally, the sixth task that is generally used to teach phonemic awareness skills is called phoneme segmentation. In phoneme segmentation, the child is taught to break a word into sounds by tapping out or counting the sounds or by pronouncing and positioning a marker for each sound,

e.g., "How many phonemes are in *ship*? (3: /sh/ /i/ /p/)  
(Ehri et al., 2001).

Although there are six tasks typically used to teach phonemic awareness, it is best to focus on only one or two phonemic awareness skills at a time. Phonemic awareness instruction also appears to be best when it lasts between five and eighteen hours rather than shorter or longer (with the ideal session lasting 25-30 minutes) (Ehri et al., 2001). Lastly, instruction is most effective when children are taught in small groups rather than individually or in whole class instruction (Ehri et al., 2001).

Orthographies and English Spelling. According to Spencer and Hanley (2003), deep orthographies are languages in which graphemes represent a number of different phonemes, and there are many exceptions to grapheme-phoneme correspondence rules (as in English or French). By contrast, shallow orthographies are languages in which graphemes generally represent only one phoneme (as in German, Spanish, Dutch, Turkish, or Italian). According to the orthographic depth hypothesis, reading acquisition may differ according to the nature of the orthography of one's language (Spencer & Hanley, 2003). For example, Spencer and Hanley (2003) provide strong

evidence that reading acquisition is heavily influenced by how shallow the alphabetic system is, and that it is easier to learn to read in a shallow versus a deep alphabetic orthography, especially when children are being taught to read using the phonics method of instruction. Finnish, for example, has a shallow orthography. Finnish children begin school at age seven and are reading with 90% accuracy by approximately the tenth week in school. The English language, by contrast, has a deep orthography and children who begin school at four or five years of age are still struggling to reach 90% accuracy in reading by age nine or ten (Goswami, 2005). One of the reasons for this is because of the reduced consistency in both reading and spelling (Goswami, 2005).

Although English is the most inconsistent language in the world in terms of the consistency of letter-sound correspondences (Goswami, 2005), children who are better spellers are often better readers as well. Skillful readers actually do read the words and letters inside them, and becoming a skillful reader depends on whether or not the child has a deep and thorough knowledge of graphophonemic correspondence (Adams, 1993). Beginning readers will either invent letter-sound spellings or retrieve correct spellings from memory (Ehri et al.,

2001). Both processes require phonemic segmentation skills which enable the speller to match sounds to letters in words. Because English is such a deep orthography, spelling is not a simple task to master. English spelling has not been reformed for centuries despite alterations in the ways the words are spoken (Spencer & Hanley, 2003).

"Invented spelling" happens when a child does not yet know how to spell or write a word but they make an attempt. This spelling is typically an incorrect spelling but it makes sense to the child and she can read it. Invented spelling has been shown to predict early reading and has been found to have a causal role in learning to read (Ouelette & Senechal, 2008). Invented spelling increases in sophistication and gradually begins to resemble conventional spelling. There is a natural progression when learning to spell correctly: it starts with initial non-alphabetic markings, followed by the child beginning to capture the initial sounds. Then the child captures the final sounds, and finally the child can correctly identify and use the medial vowel when spelling the word. When children use invented spelling, beginners are likely to omit one of the letters in blends when they spell words (instead of *truck* they might write *tuck*) (Ehri & Wilce, 1987). Ouelette and Senechal (2008) describe this

as a developmental progression in which spelling attempts increase in phonological and orthographic accuracy over time.

According to Ouelette and Senechal (2008), there are many advantages to allowing a child to use invented spelling. First, it allows children to explore, analyze, and gain insight into the alphabetic code and begin to make important associations between phonological and orthographic representations (Ouelette & Senechal, 2008). This insight into the alphabetic code is eventually transformed into reading (Ouelette & Senechal, 2008). Also, it increases a child's ability to decode words and read familiar words more quickly (Ouelette & Senechal, 2008). Invented spelling training, along with developmentally-appropriate feedback, increases a child's phonological awareness and their implicit awareness of the orthographic rule in English that all words must contain a vowel (Ouelette & Senechal, 2008). Overall, invented spellings are highly reliable over time, strongly associated with traditional measures of phonological awareness, and significantly predictive of later spelling and word and nonword decoding tests (Flanigan, 2007).

Word Reading. According to Ehri (2005), there are four ways to read words: decoding, comparing, prediction,

and memory. The first three of these methods help an individual read unfamiliar words, and the fourth helps an individual to read words that are already known.

"Decoding" requires blending skills to transform graphemes into recognizable phonemes and words (Ehri et al., 2001).

When an individual "compares," they are using words that they already know to read words they do not yet know (reading *brick* because *kick* is already a known word).

Reading words by comparing requires phoneme segmentation and blending skills (Ehri et al., 2001). When "prediction" is used, the reader is using context and letter clues to guess unfamiliar words. Finally, the ability to read words automatically from "memory" (sight word reading) is the most efficient, unobtrusive way to read words in text (Ehri, 2005). When reading a word by sight, the reader can just look at the word and they will recognize what the word is.

A sight word is any word that is correctly read and which is read from memory. The process of learning to read sight words is enabled by phonemic awareness, graphophonemic correspondence, and by knowledge of the alphabetic system (Ehri, 2005). Once the alphabetic system is known, readers can build a vocabulary of sight words easily by associating printed words with their

pronunciations (Ehri et al., 2001; Ehri, 2005; Lervag, Braten, & Hulme, 2009).

Ehri (2005) has identified four phases that readers go through during sight word development: pre-alphabetic, partial alphabetic, full alphabetic, and consolidated alphabetic. In the pre-alphabetic phase, if a child is even reading at all, she is able to do so by remembering the visual features of words and storing these in memory (Flanigan, 2007). For example, she might remember the word *look* by the two eyeballs in the middle, or the word *dog* by the tail at the end, or the word *camel* by the humps in the middle of the word. This first phase will work for initial words but it will eventually break down because of the confusions that will arise between words which share the identifying feature ("*pig*" and "*goat*" both share the same "*g*" that is in the word "*dog*") (Seymour & Duncan, 1997). For progress to continue, it is necessary for a child to adopt a new hypothesis acknowledging that words are composed of letters, that their positions are important, and that these letters represent the elements of sound, or phonemes, which make up spoken words. This letter knowledge is what is required to move from the pre-alphabetic phase to the partial alphabetic phase (Ehri & Wilce, 1987).

In the partial alphabetic phase, an individual begins to learn the names and/or sounds of letters (the alphabetic code) and uses these to remember how to read words. In this phase, although letters and sounds are used, these readers possess only some of the letter-sound relations (usually the first and last letters in words such as the *s* and *n* in *spoon*) and typically lack knowledge of vowels. This child is reading words by accessing stored associations between some letters in the spelling of the words and some sounds in the pronunciations of those words, yet, because of her incomplete level of knowledge, she is unable to break the words she is reading into their correct phonemes (Ehri & Wilce, 1987). The child now selects cues that are no longer arbitrary; instead, this partial alphabetic reader is beginning to use a more reliable system based on letter-sound relationships (Flanigan, 2007). This is also the phase when invented spelling begins. The individual will often write only the more prominent sounds in the words and will usually leave out the medial letters (i.e., the letters that are between the first and last letter in a word, such as the "a" in "cat" or the "oa" in "boat") (Ehri, 2005). This is the phase where poor readers often remain (Ehri & Wilce, 1987).



In the full alphabetic phase, the reader has finally gained the full knowledge of the alphabetic system, including vowels. She has also developed full knowledge of graphophonemic correspondence, phoneme segmentation, and has internalized the orthographic rule in English that spellings systematically correspond to pronunciations through phonemes (Ehri & Wilce, 1987). These readers can learn sight words by forming complete connections between the letters in the spelling of the word and the phonemes that those specific letters represent (Flanigan, 2007). The final phase, i.e., the "consolidated alphabetic" phase, emerges as the reader retains increasingly more sight words in memory (Ehri, 2005). For these readers, the grapheme-phoneme connections become more easily consolidated into larger units and they are familiar with the letter patterns that commonly occur in word spellings (Ehri, 2005). This aids them in their ability to read and spell larger units such as rimes (i.e., spelling is necessarily the same with rime, but not with rhyme. For example, mean and green rhyme, but do not share the same rime whereas mean and bean share the same rime: "ean") syllables, and morphemes (Ehri, 2005). These larger letter chunks help the reader to read multisyllabic words like *interesting* because there are fewer connections that are

required to commit the word to memory (Ehri, 2005). In this example, the word *interesting* is reduced from ten grapheme-phonemes to only four syllables.

The "Concept of Word in Text". "Concept of word in text" refers to the idea that it is only in learning a written language that conscious awareness of words as separate linguistic units within the text truly becomes necessary (Flanigan, 2007). This means that within a written body of text there are separated words, not simply a string of letters with no breaks in between. The concept of word in text is shown to play an important role in early reading development. A child's concept of word in text is a strong kindergarten predictor of first grade reading achievement. Also, a child's understanding of word in text allows emerging phonological and letter-sound knowledge to be used while reading, and it fosters an awareness of phonemes in words. According to Flanigan (2007), a child's concept of word in text is an important bridging skill that allows beginning readers to use their knowledge of the alphabet, beginning consonants, and letter sounds to gain an initial understanding while reading.

In order to learn to read, children must be able to match spoken words to printed words. However, most

children begin reading instruction without a complete grasp of this very concept - the understanding that the stream of speech they have been producing and listening to for many years is composed of word units, not simply a long string of letters (Flanigan, 2007). The average six-year-old entering first grade possesses an expressive vocabulary of approximately 2,600 words and can understand between 8,000 words and 10,000 words (Flanigan, 2007). Clearly, it is not that pre-readers cannot discriminate phonemes or learn so called letter sounds; in fact, they must in order to speak all these 2,600 words. It is simply that, lacking a stable concept of a word as a figure with a beginning and an end, they do not know where to focus their attention when they try to read (Flanigan, 2007).

From the beginning reader's perspective, a line of text may appear as a string of letters, with no boundaries between words (Flanigan, 2007). In this case, the difficulty experienced by beginning readers with accurately tracking words is not surprising. If beginning readers cannot accurately point to and match spoken words to written words, they will likely struggle to decode new words in text (Flanigan, 2007). This ability of a child to match spoken words to written words while reading connected text is a developmental skill that bridges a

basic form of phonological awareness (i.e., beginning consonant awareness) with a more advanced form of phonological awareness (i.e., full phoneme segmentation). In fact, Flanigan (2007) found that phonological awareness is significantly related to the development of the concept of word in text.

Flanigan (2007) describes the multiple stages that a reader experiences while learning that there are separated words within a body of text. At first the reader starts attending to the first letter or sound of a word ("ILMD" i.e., I love my dog). Eventually they attend to the final letter or sound as well ("I LF M DG" i.e., I love my dog). Once a reader becomes aware of the first and last letter they become much better at tracking text. After that, they are able to identify the all-elusive medial vowel. This is the vowel that is in the middle of a word that makes the word a pronounceable word, like the "o" in "dog." Finally, it is at this point that children can perform full phoneme segmentation because they understand the concept that there are separated words in text (Flanigan, 2007).

Whole Language Instruction. "Whole Language" is a philosophy of literacy education that involves a set of beliefs about how children learn to read (Adams, 1994; Stahl & Kuhn, 1995). It is not a method or collection of

activities, but rather a philosophy that underlines all of the teachers' instructional decisions. It is important to note that there has been very little research on whole language showing its effectiveness or lack thereof. Most of the research on whole language has been done in comparison to phonics instruction since phonics instruction is easy to identify and whole language, due to its philosophical rather than scientific nature, is not easily identifiable to observe and document.

There are five main beliefs that define the philosophy of whole language instruction: learning to read is a natural process, language is to be used "authentically," children need to learn language in a whole state, child-centered learning, and student/ teacher empowerment (Stahl & Kuhn, 1995).

The first belief is that just as a child learns to speak naturally by being immersed in a language-rich environment, so will they learn to read naturally by being immersed in a print-rich environment; i.e., learning to read will come as naturally as learning to speak (Sears, 1999; Kotaman, Tekin, & Tekin, 2007; Vellutino, 1991). Advocates of whole language will even argue that the alphabetic principle will naturally be included with experience in reading, especially if writing and invented

spelling activities are integrated with reading (Vellutino, 1991). In fact, invented spelling is the tool that helps children in whole language classrooms to master spelling-sound correspondences (or graphophonemic correspondence, GPC) (Sears, 1999).

A second belief of whole language is that language is used for "authentic" purposes only (i.e., communication, enjoyment, and information), both in reading and in speaking (Pressley, 1994). When language is used for authentic purposes, it is being used in situations where it is typically used by the general population. Using language for non-authentic purposes would include presenting it in unnatural ways such as work sheets, mindless drills, or memorization of inconsistent reading rules (i.e., "i before e except after c" or "when two vowels go walking the first one does all the talking"). A great deal of importance is placed on "natural learning" which includes participation in literate activities such as story reading, song writing, or following a recipe (Hampenstall, 1997). When children's worlds are filled with books, they are thought to be stimulated to read, and this consistent interaction with high-quality literature is thought to foster growth in understanding the structure

of stories which will positively impact comprehension (Pressley, 1994).

Third, children are thought to learn language best if it is learned in a whole state, not broken into small parts for their own sake and studied on a worksheet. In fact, there is a tenet that whole language is only whole language if it is whole (Adams, 1994). According to Whole Language philosophy, children should never be taught to read by breaking whole (natural) language into bite-sized abstract pieces. Whole language does not support the teaching of isolated skills such as phonics that breaks language into its component parts (Sears, 1999). In fact, the language that a child encounters in print should be as whole as the language they encounter in the natural environment rather than fractioned into words, syllables, or individual sounds (Vellutino, 1991). The focus is placed more on sentences and words than syllables and letters (Kotaman, Tekin, & Tekin, 2007). Rather than teaching isolated skills which are segmented and frequently stripped of meaning, whole language curriculum has tended to focus on the development of literacy strategies through student interaction with meaningful pieces of connected text (Brooks-Harper & Shelton, 2000).

Fourth, it is believed that in child-centered learning, i.e., the instruction of specific skills (letter sounds, silent letters in words, nouns vs. proper nouns, etc.) should occur in response to the students' needs, not when the teacher or curriculum determines that the particular skill should be taught. The nature of the child is the determinant of what will be learned, when, and through what experiences (Adams, 1994). This is because children progress at different rates and respond differently to instructional practices. Teachers of whole language classrooms argue against whole-class lessons where all children receive the same kind and amount of reading instruction (Sears, 1999).

Finally, there is a belief in empowering children to direct their own learning and teachers to construct a classroom that meets the needs of those children (Pressley, 1994). It is thought that teachers should provide choices for learners, communicate a sense of trust in the learners, encourage risk-taking, collaborate with the children in curriculum development, encourage reflection, take advantage of the social nature of learning, and lastly, empower the children to be teachers as well as learners (Hampenstall, 1997). Overall, whole language reading is thought to begin in the mind of the



reader, not with the letters on the page (Gutknecht, 1991). Below are the whole language practices that researchers have identified as effective in teaching children how to read.

Practices. It is often hard to completely understand or grasp what a whole language classroom would look like because although the instruction in the whole language classrooms will be comprehension-based and child-centered, the methodologies will be as varied as the teachers and the children in them (Adams, 1994). This is also why it has reportedly been difficult to produce an abundance of research on whole language practices; it is not easily identifiable so therefore is not easy to pinpoint and conduct research. Because the teachers aim to provide an environment which will encourage children to develop their skills at their own developmentally-appropriate pace, it makes it difficult to describe what actually occurs in a whole language classroom, or whether there is any consistency from classroom to classroom (Hampenstall, 1997). The practices that the teacher chooses to use in a whole language classroom are what make that classroom whole language and because of this, one whole language classroom is likely to be very different than any other whole language classroom. There is not a set of practices

that are "recommended" to be used in a whole language classroom. If a teacher has beliefs that align with the whole language philosophy, that teacher is considered a whole language teacher and is therefore expected to know how to carry out the philosophy of whole language. She is not given any set of guidelines or instructions to follow while implementing the whole language philosophy; she is free to act on her own accord. The teacher has a particular set of beliefs and intentions, not a manual to follow (Adams, 1994).

Another source of variation is the amount of challenge provided for the children in whole language instruction (Stahl & Kuhn, 1995). Although many whole language educators stress the importance of providing an appropriate level of challenge, many whole language teachers fail to provide such challenge. Often, teachers will allow children to choose relatively easy materials in the belief that such choice will make them want to read more. Although the intentions of these teachers are good, this has been shown to slow reading growth because the children are not challenged appropriately to push them to their next level of reading development (Stahl & Kuhn, 1995).

Some of the specific practices that do take place in most whole language classrooms include choral reading of Big Books (large in size with two or three lines of text on each page), teachers reading aloud to children, exposure to other students reading, guessing words in context and by using pictures, sustained silent reading (SSR), and author's chair (Kotaman, Tekin, & Tekin, 2007; Stahl & Kuhn, 1995). Reading materials consist of authentic high quality children's literature and not reading materials that control for vocabulary and simplify sentence structure (Sears, 1999). In whole language classrooms, children read a broad range of materials and listen to teachers read to them aloud as well. These are the conditions necessary for vocabulary development. Of the approximately 3,000 new word meanings that children learn each year, the majority of them are from words in text. However, for some children, especially those who lag behind their peers in reading, direct instruction in word meaning is required (Stahl & Kuhn, 1995).

One suggestion of what to do in whole language classrooms includes providing meaningful experiences and activities for the language learner that are real, whole, and relevant. These types of experiences can be made available in a classroom containing a book area, a

listening area, a discovery area, a writing area, and a role playing area which will make the learning experience real to the children. For example, an activity centering on learning that the letter *C* has two sounds /s/ and /k/ doesn't meet the criteria. On the other hand, second graders writing about their trip to the *circus* and learning of the two sounds of *C* does meet this criteria (Gutknecht, 1991).

Because the effectiveness of whole language instruction lies in how it is practiced, not if it is practiced, there are a number of effective whole language classrooms that integrate phonics instruction (Stahl & Kuhn, 1995). These classrooms include phonics instruction so the issue is not whether phonics is supposed to be taught in whole language, but how it is actually integrated into the classroom. Phonics instruction needs to be child-centered, intensive, strategic, and often taught at the point of use (like in the *circus* writing example). Phonics skills need to be taught within meaningful contexts of reading activities to maximize children's application of phonics concepts as they read (Dahl & Seharer, 2000).

Overall, whole language classrooms differ in their effectiveness. This is largely because whole language is

not well defined or researched, and therefore whole language teachers' practices vary considerably. It is not whether a teacher chooses a whole language perspective, but how that perspective is implemented, that makes a difference (Stahl & Kuhn, 1995). It needs to be implemented with the philosophy in mind, not with a pre-planned out set of activities or practices. Lastly, because of the elusive nature of whole language instruction, there is often an attitude that the whole language community is closed to outsiders because outsiders don't "get it." Some may say, "If I happen to be doing one of those things I shouldn't be doing or not doing what I should be, I'm probably right to assume I can't be part of the closed whole language community, the people who already have the right answers" (Church, 1994, p. 369). However, a genuine whole language community should be anything but closed.

There is very little published empirical research on whole language practices; most of what has been written on it was published during the last fifteen years of the twentieth century. Reutzel and Cooter (1990) compared two whole language classrooms to two phonics classrooms on reading achievement at the end of first grade and found that there was a significant difference favoring whole

language to phonics instruction and when whole language instruction was used in first grade classrooms it produced reading scores that were superior to those reading scores of children learning to read with phonics instruction. Four years later Stahl, McKenna, and Pagnucco (1994) conducted a meta-analysis of fourteen studies which showed that the whole language approach produces effects on reading achievement essentially identical to that of phonics instruction and that whole language instruction seems to be effective in improving children's attitude toward reading.

Additionally, Traw (1996) found in a four-year longitudinal study that standardized test scores in districts that make a philosophical commitment to whole language do not appear to differ significantly from districts that implement phonics instruction. More recently, Sears (1999) observed the oral reading of fifteen first graders and found that whether taught to do so or not, children use the sounds of letters in learning to read and that reading developed in a more continuous fashion (as opposed to stage-like) with children becoming increasingly proficient in the utilization of all sources of information simultaneously.

## Summary

Overall, the research supports that reading instruction is most effective using a blended and balanced approach which includes aspects of both phonics and whole language into the instruction (Baumann, Hoffman, Moon, & Duffy-Hester, 1998; Brooks-Harper & Shelton, 2000; Butyniec-Thomas, & Woloshyn, 1997; Pressley, 1994; Donat, 2006; Stahl & Kuhn, 1995; Vellutino, 1991). For this reason, the current reading program is going to be one in which a balanced reading program is implemented with children in an effort to document its proposed effectiveness. Furthermore, research shows that a whole language approach is more effective in kindergarten and that a phonics approach is more effective once the child reaches first grade and beyond if the two reading instructional methods are used independent of each other (Stahl & McKenna 1994; Vellutino, 1991). Although a blended approach is said to be most effective (like those offered in programs like Reading Recovery [Pressley, 1994; Stahl & Kuhn, 1995; Ehri et al. 2001] and Reading Their Way [Donat, 2006]), there is clearly less research done on the effectiveness of whole language instruction and this weakens the strength of this instructional method. For this reason, the current study is going to test out the

recommended "balanced approach" to reading instruction (which incorporates phonics and whole language) not only to add to the research on whole language reading instruction, but to lay the ground work for research to continue to be done in the same fashion; strategic design of a reading program that combines a balance of whole language components and phonics components.

Therefore, what the research strongly suggests is that a reading program must at least include direct instruction in phoneme identification, the alphabetic code, and word identification along with the practices in whole language instruction that allow child-centered learning and child empowerment (Adams, 1994; Foorman, 1995; Vellutino, 1991). Lastly, the word identification process needs to be one that is fast acting, automatic, and rarely dependent on contextual information in order to aid in comprehension.

#### Summary and Purpose of Study

Research has identified various factors that influence reading development. For example, many researchers have studied phonemic awareness and determined that it is one of the best predictors of early reading ability and that it plays a causal role in reading



development (Ehri et al., 2001; Ehri & Wilce, 1987; Hulme, Snowling, Caravolas, & Carroll, 2005; Flanigan, 2007; Lervag, Braten, & Hulme, 2009; Lervag, Braten, & Hulme, 2009; Pressley, 1994; Sprugevica & Høien, 2003). Research has also shown that the method of reading instruction (i.e., phonics instruction and whole language instruction) used by the teacher has an impact on how children learn to read (Hampenstall, 1997; Sprugevica & Høien 2003; Stuart, 2006) with phonics instruction generally being superior. Small group reading instruction has been shown to be best in both phonics instruction and whole language instruction (Ehri et al., 2001; Kotaman, Tekin, & Tekin, 2007; Stahl & Kuhn, 1995). Home support has also been demonstrated to be an important factor in children's reading development (Boudreau, 2005; Darling & Westberg, 2004; Downer & Pianta, 2006; Griffiths, VanDerHayden, Skokut, & Lilles, 2009; Kelly-Vance & Schreck, 2002; Ortiz, 2000) in that sight word vocabulary is influenced by how much exposure to print that child has in the home in their initial years of learning to read (Constantino, 2005). Finally, phonological awareness, speeded naming, and classification (which appear mostly in the left hemisphere) have been shown to impact reading development and if they do not

develop properly, reading development will be delayed (Proverbio, Vecchi, & Zani, 2004; Simos, 2006).

Studies on method of instruction (i.e., phonics vs. whole language) have either focused on phonics instruction or whole language instruction, rarely comparing both methods simultaneously (Goswami, 2009; Lervag, Braten, & Hulme, 2009; McBride-Change & Kail, 2002; Reutzel & Cooter, 2009; Share, Jorm, Maclean, & Matthews, 1984; Sears, 1999; Stahl, McKenna, & Pagnucco, 1994; Traw, 1996). Thus, it is unclear how the methods compare with one another. In addition, when the effectiveness of phonics instruction or whole language has been studied, it is rare that a researcher also includes the effectiveness of required home participation in reading development. For this reason, in the current study not only will whole language and phonics components be used in the reading intervention program but parents will be required to read with their children every night, play a game that will increase sight word vocabulary (i.e., SuperSpeed 1000), and they will be required to work with their child on a presentation that the child will give at the end of the reading intervention program. By combining these elements of the research, the current study is going to put to the test what the research has been recommending be done.

No reading program to date has incorporated the factors identified in research as key to reading development (i.e., phonemic awareness instruction, small group reading instruction, home involvement, and hands on realistic reading activities). Furthermore, some research-based recommendations of phonics instruction (e.g., activities using games that reinforce phonics concepts and build sight words, teaching only two phonemic awareness skills at a time, and restricting phonemic awareness instruction time) and whole language instruction (e.g., reading in its whole state like recipes and directions, choral reading, and using language for realistic purposes such as communication) have not been studied in combination with one another.

The proposed reading intervention program will be unique in that it will incorporate all of the above mentioned components. Of the research that has been reviewed, no study has actually implemented this balanced approach to reading instruction that has been recommended. For that reason, the current study will look at what type and how much reading growth takes place when a balanced approach to reading instruction (combining elements of both phonics instruction and whole language instruction) is implemented in the classroom. Key components of both

phonics instruction (i.e., alphabetic code, phonemic awareness, and sight word development) and researched-based aspects of whole language instruction (i.e., small group reading instruction, repeated readings, instruction guided by the needs of the child, hands-on reading activities, and it will deliver reading in a whole state by reading books aloud and writing songs) will be combined in the current study to test out the balanced approach to reading instruction that has been recommended by so many. In addition to the balanced approach between phonics and whole language reading instruction, the current study will be unique in that it will include a home component which will address the need for parents to be involved in their child's reading development in order to increase the chances of academic success in reading for these children. By including components from both phonics instruction and whole language instruction, a home component, and learning activity centers, the proposed reading intervention program will combine key factors found in the literature that have been identified as key to reading development which has not been done to date.

The purpose of this study is, therefore, to compare the effectiveness of this research-based six-week reading development intervention with traditional reading

instruction in second grade children. It is expected that the children participating in the research-based intervention program will outperform the children receiving the traditional reading curriculum in reading comprehension, fluency, phonics skills, concept of word in text, and sight word vocabulary.

Findings from this intervention project will help identify an effective, research-based method for teaching reading to children, which will help children become more successful readers (which will carry over to success in other academic areas such as math, history, writing, and life skills. Reading is arguably the most important life skill; therefore, research-based reading instruction should be a focus of developmental and educational research.

## CHAPTER TWO

### METHODS

#### Overview

A six-week reading intervention program beginning August 2010 was implemented with five second-grade children. An additional five children were a matched control group. These 10 children were selected after determining the reading levels of approximately 50 second-grade children using the DRA (Developmental Reading Assessment). The first five days were used for administering the pre-assessments on all 10 children and for teaching the five children in the reading intervention program the classroom rules (Biffle, 2007). Pre-assessments were conducted on days 1-5. The intervention program was administered on days 6 through 21. The final day (day 22) was used for student presentations of a self-written song or poem to a common song melody. Days 23 through 28 were used to conduct post-assessments on all ten children.

#### Participants

A total of 10 children in the 2<sup>nd</sup> grade between 6 and 7 years of age participated in the current reading intervention project. All participants were English

speakers and were students in the Hesperia Unified School District in California. Five of these children participated in the reading intervention program, and the remaining five were in the control group (matched on reading level as determined by the Developmental Reading Assessment or DRA). Average mothers' age was 38 years; average fathers' age was 43 years. Fifty percent of families (n = 5) reported a marital status of "never married" with the remaining 40% reporting "now married." One family reported being divorced. Seventy-eight percent of mothers (n = 7) and 100% of fathers (n = 6) were high school graduates or less. Twenty-two percent of mothers (n = 2) had at least some college with one holding a master's degree. Ethnicity was primarily Hispanic/Latino (80%) (10% Native American; 10% Caucasian).

The Home Questionnaire described children's home reading environments. Although 100% of participants reported having books in the home (with many also having magazines and comic books), 60% of the families reported that they did not begin reading to their child until they were between the ages of two and four. Also, siblings were the second most likely family members to read to the participant (after mothers), not fathers (Table 1).

Table 1. Children's Home Reading Environment

All Participants				
How many reading materials	Types of reading materials in the home (Multiple responses possible)	How often child is read to	Who reads to them (Multiple responses possible)	Age when child was first read to
2 (20%) = 1-10	10 (100%) = Books	3 (30%) = Daily	7 (70%) = Mother	2 (20%) = Before Brth
4 (40%) = 11-50	4 (40%) = Magazines	4 (40%) = 3-5x wk.	0 (0%) = Father	2 (20%) = Brth & 1yr
2 (20%) = 51-150	2 (20%) = Comic Bks.	2 (20%) = 1-2x wk.	1 (10%) = Grandparent	0 (0%) = Btwn 1 & 2yrs
2 (20%) = >150	0 (0%) = Other	1 (10%) = <1x wk.	4 (40%) = Sibling	6 (60%) = Btwn 2 & 4yrs
			1 (10%) = Other	0 (0%) = After 5yrs
				0 (0%) = Not started yet

Intervention Group				
How many reading materials	Types of reading materials in the home (Multiple responses possible)	How often child is read to	Who reads to them (Multiple responses possible)	Age when child was first read to
0 (0%) = 1-10	5 (100%) = Books	2 (40%) = Daily	2 (40%) = Mother	1 (20%) = Before Brth
3 (60%) = 11-50	2 (40%) = Magazines	1 (20%) = 3-5x wk.	0 (0%) = Father	0 (0%) = Brth & 1yr
1 (20%) = 51-150	1 (20%) = Comic Bks.	1 (20%) = 1-2x wk.	1 (20%) = Grandparent	0 (0%) = Btwn 1 & 2yrs
1 (20%) = >150	0 (0%) = Other	1 (20%) = <1x wk.	3 (60%) = Sibling	4 (80%) = Btwn 2 & 4yrs
			1 (20%) = Other	0 (0%) = After 5yrs
				0 (0%) = Not started yet



Control Group				
How many reading materials	Types of reading materials in the home (Multiple responses possible)	How often child is read to	Who reads to them (Multiple responses possible)	Age when child was first read to
2 (40%) = 1-10	5 (100%) = Books	1 (20%) = Daily	5 (100%) = Mother	1 (20%) = Before Brth
1 (20%) = 11-50	2 (40%) = Magazines	3 (60%) = 3-5x wk.	0 (0%) = Father	2 (40%) = Brth & 1yr
1 (20%) = 51-150	1 (20%) = Comic Bks.	1 (20%) = 1-2x wk.	0 (0%) = Grandparent	0 (0%) = Btwn 1 & 2yrs
1 (20%) = >150	0 (0%) = Other	0 (10%) = <1x wk.	0 (0%) = Sibling	2 (40%) = Btwn 2 & 4yrs
			0 (0%) = Other	0 (0%) = After 5yrs
				0 (0%) = Not started yet

In fact, not a single family reported that the father ever reads to the child.

Both groups were fairly equivalent in the amount of time the child was read to at home. They were also fairly equivalent in the number and in the types of reading materials in the home. However, the age at which the children in the experimental group were first read to is later (80% were not read to until age 2-4) whereas the children in the control group were read to earlier in life (60% were read to before their 1<sup>st</sup> birthday).

#### Measures

Pre and post assessments were conducted on children in both the intervention and control groups in the following areas: phonics, sight word development, concept of word in text, reading fluency, and reading comprehension (see below). The results of these pre-assessments were used to determine each child's reading level and their specific instructional needs. All student assessment scores were documented on the student assessment scores sheet (APPENDIX A).

#### Basic Phonics Sound Test III (BPST III)

The Basic Phonics Sound test (Shefelbine, 2006) quickly assesses students' knowledge of a broad range of

phonics skills beginning with consonant sounds normally taught in kindergarten and ending with polysyllabic word patterns encountered in third and fourth grade. This assessment consists of ninety-one items and can be completed within ten minutes per child (APPENDIX B).

#### Phonemic Awareness Skills Test

Because the BPST III assesses a very broad range of phonics skills, a phonemic awareness assessment was developed to more specifically assess the six phonemic awareness skills research has shown to be most vital in learning to read (Ehri et al., 2001). These phonemic awareness skills include phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme deletion, and phoneme segmentation (APPENDIX C). This assessment, created for use in the current study, is a combination of various assessments previously created by other researchers in the field (Klein, 2010; Reading Rocket, 2010; Ruscoe, 2003; Lockhart, 2010; Sebastian & Watts, 2002; Yopp, 2010). This assessment consists of ninety items and can be completed within fifteen minutes per child.

#### SuperSpeed 1000

SuperSpeed 1000 (Biffle, 2007) is a game designed to teach readers 1000 sight words (APPENDIX D). The words in

SuperSpeed 1000 are arranged in order of frequency. "The" is the most common word in English and thus it is the first word read. "To" is the next most common word in English and is the second word read, and so forth. The 1000 words in SuperSpeed 1000 are a compilation of the well-known Dolch word list (Dolch, 1948) and Fry word lists (Fry, 1996), but are not arranged in an order identical to either. This was used in a one minute timed assessment that measured how many words each child could read within one minute. This gave an indication of how large the child's sight vocabulary was because they were told to read the words as fast as they could (and the words build upon one another based on their level of difficulty).

#### Developmental Reading Assessment (DRA)

A Developmental Reading Assessment (DRA) score was obtained for each child. The DRA (Beaver, 2006) is a series of leveled books (the "level" is determined based on the difficulty level of the text in that particular book the levels go from "A" to "40") and recording sheets (more commonly referred to as "Running Records") designed to allow teachers to determine students' reading accuracy, fluency, and comprehension levels. When administering the DRA a teacher will select a text for a student, read

several pages and then allow the student to read the next several sections. This reading is recorded on a running record. Typically, this assessment is administered at the beginning, middle, and end of the year. However, in the current study, this assessment was administered at the beginning of the intervention, and then again at the end of the intervention. This assessment was administered in a quiet area so the child was not distracted.

The child's reading level was determined by their score on their running record combined with their reading comprehension score. They were required to score in an instructional level (meaning that they are capable of instruction at this reading level but are not yet ready for independent reading at this level) on the running record (93%-94%); in addition, they were required to verbally provide at least three events from the story to demonstrate their level of comprehension (i.e., a partial story retelling) to demonstrate an instructional level in reading comprehension. The target group of children read a level 8 (early first grade reading level 1.2) on their DRA score. This assessment is fairly time consuming, requiring twenty to thirty minutes to properly assess each child.

The DRA assessment tool was also used to assess the child's concept of word in text. Each child was asked to

count the number of words in a given line of text. A running record was also used to determine if a child was ready to "pass" a book and move on to a new book that is more challenging and at a higher level. A child needed to score a 95% or above on their running record in order to advance to a higher level book during small group reading instruction. This was used throughout the entire intervention at various points when it seemed as though a child was ready to advance to the next level in reading. Finally, a running record was completed during the post assessment to determine if the child had advanced to the next level within the DRA assessment tool kit (APPENDIX E).

#### Home Questionnaire

The Home Questionnaire and Background Information Survey (APPENDIX F) was created to gather demographic data and to assess reading-related activities currently taking place in each child's home, e.g., number of books in the home, types of reading materials in the home, how much time is spent reading with the child at home (and by whom), and when the parents began reading to the child. This questionnaire consists of eleven items.

## Development of Project Design

Elements from the research literature vital to reading development were included in the design of this reading intervention program, e.g., the design of the phonics component, the design of the whole language component, how both whole language and phonics instruction are integrated (while placing an emphasis on phonics instruction), and the home activities component. The instruction minutes over the course of the 4-week reading intervention were allocated as follows:

Table 2. Instructional Minutes Per Week for 4-Week Reading Intervention

Instructional Activity	Minutes per Week	Minutes Total
Reading Instruction (RI)	80	320 = 5 hours 20 minutes
Phonics Instruction (PI)	120	480 - 8 hours
Reading Practice (RP)	40	160 = 2 hours 40 minutes
Activity Centers (C)	60	240 - 4 hours

Since research shows that a whole language approach is more effective in kindergarten and that a phonics approach is more effective once the child reaches first grade and beyond (Stahl & McKenna 1994; Vellutino, 1991),

the reading intervention program for the current study utilizes many whole language components, and it has a very clear emphasis on phonics instruction (because these children are in second grade). Children also had reading development activities to take home to work on with their parent or caretaker in an effort to promote parental involvement in the child's reading development.

### Phonics Design

Since phonemic awareness is one of the best predictors of early reading ability (Flanigan, 2007; Lervag, Braten, & Hulme, 2009; Pressley, 1994; Sprugevica & Høien, 2003; Stuart, 2006), a relatively large amount of time was dedicated to teaching phonemic awareness. For example, research has found that it is best to focus on only one or two phonemic awareness skills at a time (Ehri et al., 2001). For this reason, two phonemic awareness skills were taught and practiced each week for three weeks which allowed the fourth week to be used for review of the skills that the children struggled with the most or as an overall review of all six phonemic awareness skills.



Table 3. Schedule of Phonemic Awareness Skills Instruction Over the Course of 4-weeks

Week/ Skill	Phoneme Isolation	Phoneme Identity	Phoneme Categorization	Phoneme Blending	Phoneme Deletion	Phoneme Segmentation
Week 1	X	X				
Week 2			X	X		
Week 3					X	X
Week 4	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

Research also states that phonemic awareness instruction is best when it lasts between five and eighteen hours rather than shorter or longer (with the ideal session lasting 25-30 minutes) (Ehri et al., 2001); therefore, the phonemic awareness portion of this reading intervention lasted a total of eight hours with each session lasting 30min. Also, instruction is most effective when children are taught in small groups rather than individually or in whole class instruction (Ehri et al., 2001); therefore, the phonemic awareness instruction was taught by either the researcher or the aide in small groups of five children.

The method of phonics instruction was based on research findings. Because phonics instruction involves the direct teaching of letter sounds so that children can

get used to decoding words that are not recognized automatically by sight (Vellutino, 1991), and since this knowledge must be learned through either explicit instruction or implicit learning and practiced before the bonding of the graphemes and the phonemes in the brain can occur (Ehri et al., 2001; Stahl & Kuhn, 1995), direct instruction was used to teach two phonemic awareness skills per week in small groups. The children also practiced using these skills in activities during their "center" time. Children were allowed to practice their phonics skills by letting them play games since Stuart (2006) and Fielding-Barnsley and Purdie (2005) state that phonics instruction needs to be done in a structured, fun, and upbeat way. In addition, because phonemic awareness instruction can be enhanced when combined with additional skills instruction such as letter knowledge, deciphering the code, and graphophonemic correspondence (Ehri et al., 2001; Flanigan, 2007; Stuart, 2006; Vellutino, 1995), teaching these skills were included (when needed) during the phonemic awareness instruction time.

Finally, the ability to read words automatically from "memory" (i.e., sight word reading) is the most efficient, unobtrusive way to read words in text (Ehri, 2005). Therefore the "struggle words" in a child's pre-read of

the first 100 words in each new story were pulled out during the small group reading instruction and SuperSpeed 1000 was used as an activity/game for increasing the children's sight word vocabularies. Furthermore, because the process of learning to read sight words is enabled by phonemic awareness, graphophonemic correspondence, and by knowledge of the alphabetic system (Ehri, 2005), these skills were not only taught during phonemic awareness instruction but also during reading instruction time (by using the struggle word technique) and during center time when they played the Super Speed 1000 game. Lastly, the concept of word in text is shown to play an important role in early reading development so this was assessed in the children before the program began. If children were weak in this area, this skill would be included during our reading instruction time.

#### Whole Language Design

Although there is little research on whole language reading instruction, the research that has been conducted guided the development of this portion of the reading intervention program. The reason for including some of the research based components of whole language instruction is to create a balanced reading program. Although the current research on whole language reading instruction is weak, it

is vital to include some of the whole language components in the current study in an effort to make it a balanced reading program between phonics and whole language. Many of the components of the whole language approach such as the message board (i.e., where children post messages to classmates for communication), the posted daily schedule (i.e., where the daily schedule for each group is posted for information and communication), reading the *You Read to Me, I'll Read to You*<sup>1</sup> book (i.e., for choral reading, reading aloud, and listening to language in a whole state), and song writing and the recipe center (i.e., for natural language usage) were utilized in this study.

For example, one part of the whole language philosophy is that language be used for "authentic" purposes only (i.e., communication, enjoyment, and information) (Pressley, 1994). Therefore, the classroom had a message board (e.g., "communication") where children wrote messages for the rest of the class and posted them on the wall for their peers and/or teachers to read, a posted daily schedule (e.g., "information"), and the *You*

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<sup>1</sup> The book *You Read to Me, I'll Read to You* (Hoberman & Emberley, 2004) offers eight fairytales for a read aloud requiring two voices. The color and placement of the text on the pages indicates the different parts. There are also portions of the book where both voices read together and this is also indicated by color and text on the page.

*Read to Me, I'll Read to You* book of Fairy Tales were projected onto a wall using the Elmo projector. This was read by the children and the researcher or aide (e.g., "enjoyment").

It is also vital in the whole language philosophy to provide meaningful experiences and activities such as a "discovery area" which took place while following a recipe or directions such as how to make play-doh or how to make an envelope out of a sheet of paper. In addition, there was a "writing area" where children wrote messages for our classroom message board (Gutknecht, 1991).

In addition to following a recipe or a set of directions as an example of "natural learning," Hampenstall (1997) used story reading and song writing as activities where language is used naturally. This was achieved in the current study by having small group reading instruction time and by having children give presentations at the end of the five weeks where they write a song to a known melody (e.g., "Row row row your boat" or "Twinkle twinkle little star"). They had five weeks to prepare the presentation which was due on the last day. They were given the choice to either present it to the class on their own or it would be presented for them by either the researcher or aide if they turned it in

at least one day early and taught the researcher or aide how to sing it. The children were given examples beforehand of how to write a song to a melody. They worked on this at home with their parents.

Additionally, some of the other practices that take place in most whole language classrooms include choral reading of big books (which are large in size with two or three lines of text on each page), teachers reading aloud to children, exposure to other students reading, and sustained silent reading (SSR) (Stahl & Kuhn, 1995; Kotaman, Tekin, & Tekin, 2007). This is why *You Read to Me, I'll Read to You* was read with children on the Elmo Projector, why children read aloud during reading instruction time, why children read aloud during both reading instruction time and during the reading of *You Read to Me, I'll Read to You*, and also why there was time allowed for independent reading similar to SSR.

Lastly, because reading instruction has been shown to be most effective when done in small groups (as opposed to whole class) (Sears, 1999; Ehri et al., 2001), leveled reading instruction (i.e., where the reading instruction is strategically designed to meet the child at their reading level) was used with children in small groups.

### Balance with Emphasis on Phonics

The research overwhelmingly agrees that reading instruction is most effective using a blended and balanced approach (which incorporates various aspects of both phonics and whole language into a reading instruction program) (Baumann, Hoffman, Moon, and Duffy-Hester, 1998; Brooks-Harper & Shelton, 2000; Butyniec-Thomas, & Woloshyn, 1997; Pressley, 1994; Donat, 2006; Stahl & Kuhn, 1995; Vellutino, 1991). Therefore, a balanced program that includes phonics instruction and whole language instruction was utilized; thus requiring the use of many whole language components and phonics components in the development of this reading intervention program. The research strongly suggests that a reading program must include direct instruction in phoneme identification, the alphabetic code, and word identification along with the practices in whole language instruction that allow child-centered learning and child empowerment (Adams, 1994; Foorman, 1995; Vellutino, 1991). This is what led to the inclusion of the phonemic awareness instructional component which included phoneme identification, the alphabetic code, and word identification (which was also taught during reading instruction). Also, because the word identification process needs to be one that is fast

acting, automatic, and rarely dependent on contextual information in order to aid in comprehension (according to research on both phonics [Ehri, 2005] and whole language instruction [Kotaman, Tekin, & Tekin, 2007]), the "struggle words" technique and the SuperSpeed 1000 game used. In addition, because research on whole language recommends child-centered learning and child empowerment (Hampenstall, 1997; Pressley, 1994), children's growth was documented with personalized growth charts (i.e., "child-empowered") as was their rate of reading development (i.e., "child-centered"). The personal growth charts were also used in an effort to prevent young children from becoming turned off from reading at an early age due to the fact that they are typically only made aware of all they cannot do rather than the very real progress they have made (Freeman, 2001); these personal growth charts were designed to help them to see the progress they have made.

### Procedure

Although it was originally planned for the control group to be in their homeroom and be taught reading by their homeroom reading teacher, that changed. Because the lead researcher was hired by the school district to be a



reading intervention teacher, she was able to work with both the control group and with the intervention group each day. Once the pre assessments were completed on all ten children, the five children in the control group did not receive reading instruction during the same one-hour period in another classroom with the same teacher. Instead, they received their reading instruction by the lead researcher during a different one-hour period each day.

The reading intervention program used with the five control group children was the Literacy Group component of the Arkansas Comprehensive Early Literacy Model which began when the Arkansas Department of Education collaborated with the University of Arkansas at Little Rock to develop this early literacy program for k-2 classroom teachers. Many of the components of this program mirror the Reading Recovery Program which also came out of the University of Arkansas in 1990. Although the current program allowed one hour for this reading intervention group, the Arkansas Model calls for exactly 45min of instruction. For the remaining 15min we allowed the control group children to engage in independent reading of familiar guided reading books. There are a total of eight components to the Literacy Group portion of the Arkansas

Model and it is expected that the teacher strictly adhere to the time frame for each component. During the first 5-7min component, the children engage in familiar reading while the teacher conducts a running record. The second component is 2-3min. long. During this time the teacher leads the children in shared alphabet reading to promote letter knowledge. This is followed by the third component which lasts between 5-7min. During this time the teacher and the children engage in shared reading where the teacher reads any text aloud to model good reading. After this there is the fourth component which lasts 5min. It consists of a read aloud time where the teacher chooses a text at any level and reads it out loud to model fluency and to build background knowledge. The fifth component consists of 5-7min. of building (more commonly referred to as "word work") where the teacher engages the children in an activity where children play with letters and sounds in an effort to help them develop knowledge of how letters work when paired with other letters and in new words. This is done using materials like letter blocks or card or letter magnets. The sixth component is interactive writing and it lasts between 5-8min. During this time the children work interactively with the teacher to construct a story on large chart paper. The seventh component lasts for

10min and used for independent writing. The students construct an oral story and then they write it down. The eighth and final component is used for the introduction of a new book and a guided reading lesson (similar to the one done with the intervention group, although done much faster).

During the first week of the current reading intervention program, along with completing all the assessments, the following five classroom rules were taught to the ten children in this reading intervention program: follow directions quickly, raise your hand for permission to speak, raise your hand for permission to get out of your seat, make smart choices, and keep your dear teacher happy (Biffle, 2007). These five classroom rules are currently in use at Topaz Preparatory Academy (the site of the current study) so children will be familiar with them. In addition, children were taught how to follow daily routines (i.e., what to do when working at an independent activity center, how to transition from one activity to another, what to do when you get to class, how to play various games such as SuperSpeed 1000 and phonics based board games, and what it means to "read independently using gestures").

Following is the description of what was planned for each of the twenty instructional days during the reading intervention program.

Table 4. Key to Abbreviations in Table 5

Event Abbreviation	Description
RP	Independent reading practice time
RI	Reading instructional time
PA	Phonemic awareness instructional time
C	Reading and phonemic awareness activity centers:
ss	SuperSpeed 1000 (weekly)
yrir	You Read to Me, I'll Read to you (weekly)
rd	Recipe/Direction following (twice during program)
bg	Board games (twice during program)
mb	Message board writing (weekly)

Table 5. Typical Hour of Instruction Each Day: This Five Day Cycle will Repeat Four Times (For a Total of 20 Days)

	Day 1	Day 2	Day 3	Day 4	Day 5
	Event/Min.	Event/Min.	Event/Min.	Event/Min.	Centers/Min.
Children will be in small groups.	RP - 10	RP - 10	RP - 10	RP - 10	ss - 10
	RI - 20	RI - 20	RI - 20	RI - 20	yrir - 20
	PA - 30	PA - 30	PA - 30	PA - 30	rd/bg* - 20
					mb - 10

\*Recipe/Direction following (rd) and Board Games (bd) will alternate every other week.

### Centers

There were five "centers" in the classroom: following recipe/directions center, board games, writing center, SuperSpeed 1000, and a read aloud center.

For example, children followed a simple recipe once during the program (e.g., play-doh, APPENDIX G) with the guidance of a second aide. They followed directions on how to make an envelope once during the program with an aide (APPENDIX H). Children also played phonics skills-based board games weekly in teams of four (APPENDIX I). Once a week children participated in writing messages for the classroom message board. They also played the SuperSpeed1000 game weekly where they sat with a partner and their partner timed them and alerted them of words that they read incorrectly. Their progress (measured by

increased sight word development) was tracked in their student progress folder by "number of words read correctly in one minute" (APPENDIX J). For twenty minutes each week, the children participated in reading from the book titled, *You Read to Me, I'll Read to You* by Hoberman and Emberley (2004). Before reading the book with the children, the researcher/aide pulled out words from the book that were likely to be challenging for the children. These words were written on index cards and practiced before the reading of the book began with the children.

#### Small Group Phonemic Awareness Instruction

Groups of five children worked with a teacher four days a week for 30min. on various phonemic awareness skills. The phonemic awareness small group instruction focused on two skills per week. These skills involved the child performing explicit manipulations on, or judgments about, the sound structure of spoken words. The six skills that were taught included: phoneme isolation (where children are taught to recognize individual sounds in words, "Tell me the first sound in *paste*" /p/.), phoneme identity (where children are taught the common sounds in different words. For example, "Tell me the sound that is the same in *bike, boy, and bell*" /b/.), phoneme categorization (where children are taught to recognize the

word with the odd sound in a sequence of three or more words. For example, "Which word does not belong? *Bus, bun, rug.*" [rug]), phoneme blending (where children are taught to listen to a sequence of separately spoken sounds and blend them to form a recognizable word. For example, what word is /s/ /k/ /u/ /l/? [school]), phoneme deletion (where children are taught how to identify what word remains when a specified phoneme is removed: for example, "What is *smile* without the /s/? [mile]), and phoneme segmentation (where children are taught to break a word into sounds by tapping out or counting the sounds or by pronouncing and positioning a marker for each sound. For example, "How many phonemes are in *ship*? (3: /s/ /i/ /p/). The words that we worked with all came directly from the stories that the children were reading during small group reading instruction time.

#### Small Group Reading Instruction

Groups of five children read with a teacher four days a week for 20min. These groups featured story books that were predictable (i.e., familiar concepts, supportive illustrations, repetitive elements). There were four phases during the small group reading instruction. First, in order to provide a "natural and authentic" reading experience and to provide children with a meaningful

exposure to the text (Stahl & Kuhn, 1995; Brooks-Harper & Shelton, 2000), the researcher/aide introduced the book by passing out a copy of the book to each child, and she lead them on a "picture walk" of the story, making predictions about what the story might be about. Second, the teacher read the book to the children while they followed along with their copies. Third, each student was given an opportunity to read aloud the first 100 words of the story (or less if the story was not long enough) to the teacher while the other children in the group read silently and followed along. While each child was reading aloud, the teacher quickly notated the words that the child struggled with (referred to as "struggle words") to later be written on small flash cards that the child would keep and study before they read the book again. A word was considered a struggle word if the child showed the need to make an identifiable effort to read the word (i.e., pronounced incorrectly, repeated more than twice, sounding out, skipping, or asking for help). Lastly, each child was given time to study their struggle word flash cards repeatedly with the teacher until the reading session was over. The flashcards were used at the beginning of all subsequent readings of that particular book. With each new book, new flashcards were made. Each child did not have



more than three books at a time to read during their reading practice time. Children did not move on to more challenging/higher level books until they could read the books that they already had with at least 95% accuracy (using a running record assessment) and provide most of the important events from the beginning, middle, and end generally in sequence in retelling a story. The difficulty levels of the books to be chosen for the small group reading instruction have been determined based on the Fountas and Pinell Guided Reading Levels provided by Weaver (2000). Children who read at a level 8 on their DRA read guided reading books from level E (first grade second month, 1.2) according to Weaver (2000).

#### Independent Reading Practice Time

All children had a reading practice time during the first 10min. of the day, four days a week, where they were allowed to practice reading the books they had already read with a teacher (or aide) during reading instruction time. This reading was done with gestures which illustrated what was happening in the story. Before they began any particular book during reading practice time, they were required to quiz themselves on the respective flashcards for that book (i.e., the words they originally struggled with while reading the book with a teacher).

### Home Activities

Children participated at home with their parent or caretaker by doing the following activities: reading a familiar book with a parent or caretaker for 20min. and practice SuperSpeed1000 for one minute per night (a copy of the game will be sent home with each child in their student progress folder). Each Monday during the reading intervention program, children were required to turn in their "My Reading Record" sheet which was initialed by the parent and child that these activities were completed at home during that week (APPENDIX K). There was one homework assignment where children were given the entire five weeks to prepare for a presentation. They were asked to write a song to a melody that they already knew (i.e., "Row row row your boat" or "Twinkle twinkle little star", etc.). Then they performed their song for their classmates (or had the researcher perform the song if given enough preparation) on the last day of the reading intervention program, before post assessments (APPENDIX L).

## CHAPTER THREE

### RESULTS

The purpose of this study was to compare the effectiveness of a research-based six-week reading development intervention with traditional reading instruction in second grade children. It was hypothesized that the children participating in the research-based intervention program would outperform children receiving the traditional reading curriculum in reading comprehension, fluency, phonics skills, concept of word in text, and sight word vocabulary. To test this hypothesis, the reading intervention program developed for use in this project was carried out with five children (with another five used as a control group). At the outset of the program these two groups were fairly equivalent in their home reading environment, demographic data, and reading ability.

Results indicated that the children who participated in the reading intervention program overall outperformed the children in the control group in reading comprehension, fluency, phonics skills, and sight word vocabulary (Table 6). Specifically, children in the reading intervention group showed 6 months of reading

growth (in comprehension and fluency; DRA) while the control group showed only 3 months' growth. In addition, the intervention group grew by 38% in their sight word vocabulary (see SuperSpeed 1000 results Table 6) while the control group grew by only 25%. Finally, children in the intervention program grew by 18% in phonemic awareness while children in the control group grew by only 10% (Table 6). Although the intervention group made almost twice the growth as the control on the phonemic awareness assessment, both groups (control and intervention) ended up at virtually the same place (92% and 94% respectively). Because of this, it is unclear if this is due to the effectiveness of the respective programs or if it is an artifact of the very small sample size. The only area where the control group outperformed the intervention group was on the BPST III. For this assessment, children in the control group grew by 10% in their basic phonics skills (i.e., consonant sounds, vowel sounds, CVC words like "cat", digraphs, consonant blends, inflectional endings like "ed" and "ing", final "e", etc.) while children in the intervention program grew only by 5%.

Table 6. Raw Scores of Reading Assessments for Control  
(n = 5) versus Intervention (n = 5) Groups

Assessment/ Definition	Control (n = 5)				Intervention (n = 5)			
	Pre-Assessments		Post-Assessments		Pre-Assessments		Post-Assessments	
BPST II Tests for basic phonemic skills	SN	Score	SN	Score	SN	Score	SN	Score
	2	37/91 = 41%	2	49/91 = 53%	1	40/91 = 44%	1	40/91 = 44%
	3	37/91 = 41%	3	38/91 = 42%	4	39/91 = 43%	4	41/91 = 45%
	6	39/91 = 43%	6	47/91 = 52%	5	32/91 = 35%	5	40/91 = 44%
	7	42/91 = 46%	7	52/91 = 57%	8	45/91 = 49%	8	53/91 = 58%
	9	29/91 = 32%	9	40/91 = 44%	10	55/91 = 60%	10	59/91 = 65%
	Avg. 37/91 = 40%		45/91 = 50% (+10%)		42/91 = 46%		47/91 = 51% (+5%)	
Phonemic Awareness Tests for competency in six phonemic awareness skills	SN	Score	SN	Score	SN	Score	SN	Score
	2	76/90 = 84%	2	82/90 = 91%	1	81/90 = 90%	1	88/90 = 98%
	3	68/90 = 76%	3	83/90 = 92%	4	67/90 = 74%	4	80/90 = 89%
	6	70/90 = 78%	6	81/90 = 90%	5	53/90 = 59%	5	80/90 = 89%
	7	83/90 = 92%	7	88/90 = 98%	8	72/90 = 80%	8	86/90 = 96%
	9	72/90 = 80%	9	79/90 = 88%	10	67/90 = 74%	10	90/90 = 89%
	Avg. 74/90 = 82%		83/90 = 92% (+10%)		68/90 = 76%		85/90 = 94% (+18%)	
SuperSpeed 1000 Tests how many words child can say in 1min.	SN	Score	SN	Score	SN	Score	SN	Score
	2	41/90 = 52%	2	73/90 = 81%	1	47/90 = 52%	1	84/90 = 93%
	3	41/90 = 52%	3	66/90 = 73%	4	54/90 = 60%	4	110/90 = 122%
	6	21/90 = 23%	6	40/90 = 44%	5	44/90 = 49%	5	75/90 = 83%
	7	29/90 = 32%	7	54/90 = 60%	8	33/90 = 37%	8	54/90 = 60%
	9	37/90 = 41%	9	51/90 = 57%	10	25/90 = 28%	10	49/90 = 54%
	Avg. 34/90 = 38%		57/90 = 63% (+25%)		41/90 = 45%		74/90 = 83% (+38%)	
DRA Tests to determine reading fluency and comprehension text level	SN	Score	SN	Score	SN	Score	SN	Score
	2	8 - 92% Acc.	2	8 - 93% Acc.	1	8 - 91% Acc.	1	12 - 93% Acc.
	3	8 - 90% Acc.	3	10 - 96% Acc.	4	8 - 88% Acc.	4	16 - 91% Acc.
	6	8 - 90% Acc.	6	12 - 92% Acc.	5	8 - 90% Acc.	5	12 - 90% Acc.
	7	8 - 94% Acc.	7	12 - 93% Acc.	8	8 - 90% Acc.	8	16 - 91% Acc.
	9	8 - 90% Acc.	9	8 - 90% Acc.	10	8 - 95% Acc.	10	14 - 94% Acc.
	Avg. 8 - 91% Acc.		10 - 93% Acc. (3mo. growth)		8 - 91% Acc.		14 - 92% Acc. (6mo. growth)	

In addition to the above findings, a notable difference between the control and intervention group was the perceived level of motivation and excitement to be involved. The intervention group appeared to have more motivation and excitement than the control group, which may have been due to the differences in the design of the two programs or it may have been a result of the individuals in each group.

The home involvement component of this study showed some interesting results. Four out of five children turned in their parent acknowledgement form communicating that their parents were aware that their child had a song that they would need to be working on at home and would be presenting in class. However, the child that did not turn in their parent acknowledgement form (SN = 4) did perform her song on the last day. In addition, this is the only child that brought back all of her Reading Records complete with all required signatures for reading and SuperSpeed 1000. Of the five children, four of them ended up writing songs at home to perform on the last day of the intervention. The only child that did not prepare a song was SN=10. All five children turned in all of their Reading Records, however, some turned them in late (SN = 10) and/or missing signatures. Only one additional

child turned in all required signatures for reading (SN=1) and no additional children turned in all required signatures for SuperSpeed 1000. Out of the 19 required signatures over the course of four weeks there were an average of 17 SuperSpeed 1000 signatures and an average of 18 reading signatures.

Aside from the above findings, several aspects of this project changed during the implementation phase of this project. First, the proposed time requirement was one hour daily, but due to scheduling issues schoolwide, that time had to be decreased to 50min for each group. Second, instead of implementing this program over 20 days, it had to be limited to 16 days because of a professional development training that the lead researcher was required to attend as part of her job. (The final four instructional days had originally been intended for review of the phonemic awareness components that the children struggled with the most, so eliminating these days did not cause the children to miss out on any "new" content or concepts that they were tested on during the post assessments. Third, the assessment tools (particularly the Phonemic Awareness assessment) took much longer than expected. The time required to complete all of the assessments on the children turned out to be 10 hours

pre-assessment and another 10 hours post-assessment, double what was originally anticipated and planned for. Finally, the least informative tool used turned out to be the Basic Phonics Skills Test (BPST III) in that the total possible score was 91, and even on the post assessment no child scored higher than 59 (65%). Interestingly, the student who scored 65% was in the intervention group; and, overall, the control group outperformed the intervention group 10% vs. 5% growth on this assessment. Although the control group made more growth on the measure, the intervention group had an overall higher score in the pre and post assessments on the BPST III. The control group grew from 40% to 50% while the intervention group started out with an average score of 46% and grew to an average score of 51%.



## CHAPTER FOUR

### DISCUSSION

The overall purpose of this project was to compare the effectiveness of a research-based reading development intervention with traditional reading instruction in second grade children. Findings showed that children in the intervention group outperformed the control group on almost every assessment measure (comprehension, fluency, phonics skills, and sight word development); however, with very small group sizes, the findings should be interpreted as tentative at best.

One of the measures that demonstrated a difference in group performance was the Phonemic Awareness assessment which measured the six main phonemic awareness skills considered to be the most vital in learning to read (i.e., phoneme isolation, phoneme identity, phoneme categorization, phoneme blending, phoneme deletion, and phoneme segmentation) (Ehri et al., 2001). Results of this study demonstrated that the intervention group showed more growth and achieved a higher percentage score than the control group. The intervention group grew from 76% to 94% proficient (i.e., an 18% growth) while the control group grew from 82% to 92% proficient (i.e., a 10% growth) on

this assessment. The growth of the intervention group may be due to the fact that these children spent approximately 30min. a day reviewing each of the six components; overall, they received 1 hour of direct instruction and/or group work on each of the six phonemic awareness components by the end of the intervention period. The control group, by contrast, did not receive direct instruction on any of these six phonemic awareness components. Teachers of the Arkansas Model (i.e.; the control group) are expected to incorporate these phonemic awareness components into the various activities already established in the daily 45min. lesson. It may be, then, that since the intervention group was able to spend 1 hour of undivided time on each of the 6 components while having fun and learning in an upbeat environment, they eventually showed more growth in this area. Although the intervention group made more growth, both groups (control and intervention) ended up at approximately the same place with their final percentage score on this measure. In light of this measure, it is unclear which program was more effective in teaching these six phonemic awareness skills. At this point, due to the sample size, it is unclear if the effectiveness of the programs differed in

this area or if this was a result of the very small sample size in the study ( $N = 10$ ).

In addition to the above, Snowling and Hulme (2006) state that phonemic awareness instruction is effective with children who demonstrate reading difficulties. In the current intervention program, phonemic awareness was approximately half of the program (30min four days a week). The heavy emphasis on phonemic awareness with the intervention group, then, may have contributed toward the 18% growth on their phonemic awareness assessment. As consistent with the research by Ehri et al. (2001), the current intervention design focused on only two phonemic awareness tasks at a time (per week), and instruction lasted a total of between 5 and 18 hours (i.e., 6 hours) and it was taught in small groups. Our findings were similar to theirs in that the children who received this phonemic awareness instruction made growth in their reading ability (i.e., 6mo. reading growth vs. 3mo. for the control children). By contrast, in many of the traditional reading programs, the reading growth may be slower since the longer a reading intervention program has been around, the more likely it is that teachers and school staff "tweak" the program to fit their needs, thus pulling it further away from the original research-based

program that it was originally intended to be. The original Arkansas Model designed at the University of Arkansas at Little Rock by Dorn, French, & Jones (1998) was a school-wide reform model and was piloted in 1999-2000 and showed remarkable growth in first and second grade children's reading performance (Chism, 2000; Dockter, 2000). The model involved a school literacy coach, a reading recovery teacher, and the homeroom teacher and was supposed to include more than just 50 minutes of reading intervention daily. The way that it was used in the current project was not how it was originally designed, however. While it was originally designed to be a second "dose" of what was actually happening in the classroom, the Hesperia Unified School District trained its teachers to implement the Arkansas Model in a way that it was not a second dose of reading instruction for these children; often it was their only reading instruction for the entire day. This is an example of how a program that was originally based on research and was shown to be effective when it was implemented was "tweaked" to meet the needs of the school staff and was therefore not the research-based program that it was originally intended and designed to be.

The SuperSpeed 1000 measure was a very useful assessment tool in this battery of measures. As supported by previous findings (Ehri, 2005), the process of learning to read sight words was enabled by direct instruction in phonemic awareness skills. The phonemic awareness of the intervention group increased by 38% in their ability to read as many words correctly in one minute as possible, while the control group grew by only 25%. The ability to read words automatically from "memory" (sight words reading) was highly correlated with being able to read words in text (Ehri, 2005). Although both groups made impressive reading growth, the intervention group may have made greater growth (6mo. vs. 3mo.) due to the consistent use of the SuperSpeed 1000 game where children practiced over and over the most frequently appearing words in reading. This was turned into a game which was fun for the children so they looked forward to playing; in the meantime, they increased their sight word vocabulary by 38% which likely impacted their ability to read text at a higher level. SuperSpeed 1000 was not used as a game or learning tool in the control group.

Consistent with the findings of Stuart (2006), these results show that *the way phonics instruction is delivered* may affect the amount of learning that takes place. The

Literacy Groups from the Arkansas model, used with the control group instruction, is very fast paced and there is little time to spend on each component. At most, that model allowed approximately 5-12min. per day for phonics instruction and this time was divided between word work and interactive writing. It was not necessarily "fun" or "upbeat," which are two of the components that help to make phonics instruction effective. In the intervention group, by contrast, phonics instruction was constantly fun and upbeat. Children would play matching games, reading games, board games, and they would even sing songs that demonstrated particular phonemic components.

The reading program used with the control group (Literacy Groups) is very rigid and very fast paced. For example, with very specific minutes allocated for each of the 8 components (5min on average for each), the teacher is rarely allowed to be creative with how he or she is strategically designing each lesson to meet the needs of the children in that group. When being trained in this program, the teacher is docked points on the evaluation if (s)he goes over or under in any one of the 8 areas. There are very high expectations placed on the teacher in that they are told that if they teach for even 1min. more or less than the "suggested" time laid out in the program

guide, their instruction will be less effective than if they implement it as designed (it is not clear whether this method of training teachers was based on research for this model of reading instruction, however, it is based on the training methods used in the Reading Recovery Program designed by Marie Clay in the late 1970s). Therefore, teachers are not encouraged to stray from the program at all, even if, according to the teacher, it would be in the best interest of the child. There is little time to allow for individual differences in children. The current reading intervention program, although it was designed to follow a *general* time line each session, allowed for more flexibility and could accommodate for child differences.

The differences between the success of the intervention vs. control groups may also be that these findings are similar to those of Stuart (2006), who demonstrated that most children at-risk of reading failure can be taught to read as long as the appropriate instruction is given and delivered in the appropriate way (i.e., structured, fun, and upbeat). The Arkansas Literacy Groups were very structured (i.e., each of the 8 components had to be taught in their specific order every day and only the specific suggested time had to be allocated to each component); however, they lack the

required "fun" and "upbeat" components (i.e., matching games, reading games, board games, group learning activities). In general, the Arkansas lessons appear very rushed. Also, in the literacy groups, the lesson plans are already laid out. The teacher can allow only brief minutes (usually between 3-7min) per literacy area. Because there are 8 literacy areas covered in each brief 45min session, there is very limited flexibility when trying to incorporate learning board games and quality reading lessons. In the current reading intervention program, by contrast, there was enough flexibility to rearrange the order of the components of each lesson when trying to incorporate learning games and/or thorough Guided Reading lessons with the intervention group.

In light of the differences between the instructional strategies used between the two groups, there was an impressive amount of growth that happened in just 16 instructional days (i.e., many children made at least 6months of reading growth). For example, there was one student in the intervention group (SN #10) who had absolutely no support at home according to the information he would share in class. For example, he commented that "My grandma slept all day yesterday and this morning so she couldn't sign my reading record." This is one of the



many similar stories he would share. He was also very unorganized, forgetting to bring his folder to group frequently and having to go back to class to get it. In spite of these challenges, he still made significant growth (6months of growth). This child's reading growth was surprising considering the abundance of research which shows that a lack of support at home impairs reading success in school (e.g., Boudreau, 2005; Darling & Westberg, 2004; Downer & Pianta, 2006; Griffiths, VanDerHayden, Skokut, & Lilles, 2009; Hart & Risley 1992; & Kelly-Vance & Schreck, 2002).

On the last day of the intervention children were expected to bring their songs to school that they had been writing at home with the assistance of their parents. It is not surprising (considering the information above) that SN=10 did not come prepared to perform his song, he had not written one. However, all four of the other children in the group wrote their songs and performed them on their own. It was precious to see how confident and proud they were during their performances. For example, here is one of the songs written by SN=1 and she sung it to the tune of Old McDonald Had a Farm:

Topaz Academy is a lot of fun,

E-I-E-I-O

On the playground it's so much fun,

E-I-E-I-O

You can run to the swings, or to the slides

Swings or slides,

Swings or slides,

Everywhere you look it's swings or slides

Topaz Academy is a lot of fun

E-I-E-I-O

You can go pick books at the library

E-I-E-I-O

So many books that you can choose

Books over here

Books over there

Everywhere you look they're so many books

Topaz Academy is a lot of fun

E-I-E-I-O.

Here is another example from SN=5 and he sung it to the  
tune of Twinkle Twinkly Little Star:

Topaz, Topaz you are so cool.

That's why I like to come to school.

We have fun at school.

Topaz, Topaz you rule!

Although these songs may not line up precisely line per line as far as required syllables to make the melody sound exactly the same, these students did an impressive job as song writers in creating songs that sound similar to songs they already know! This shows the amount of home involvement and support that these children had in order to be able to come to school prepared to perform a self written song. They clearly had the support they needed to come to school and be successful on this assigned task.

Although the control group made slightly more growth according to the Basic Phonics Skills Test (which assesses for phonics skill such as consonant sounds, vowel sounds, CVC words like "dog", digraphs, consonant blends, inflectional endings like "ed" and "ing", final "e" etc.; 10% vs. 5% growth), their post-assessment score was not higher than the intervention group's score (50% vs. 51%). There is no identifiable reason that this difference in growth took place. One hypothesis is that the control group was ready to make the growth required to have a success rate similar to the intervention group. A second hypothesis is that similar to the findings by Stuart (2006), phonics needs to be taught in an "organized", "fun", and "upbeat" way. This is the way that phonics instruction was delivered in the intervention group by

using group learning activities and board games to teach various phonics skills. There was little if any time to allow for this level of "fun" and "upbeat" teaching of phonics in the Arkansas Model as it is very fast paced and only allows a limited amount of time for each of the eight components to be taught in 45min. Furthermore, as Owens (2008) suggested, children will eventually begin to read words larger than CVC (consonant-vowel-consonant) words such as "cat" and "bat" with proper guidance. However, Owens (2008) states that some children may take longer than others before they are ready to advance to the larger words. This could also be used to interpret the differences in growth seen on the post-assessment scores of the Basic Phonics Skills Test.

#### Limitations

There were limitations to this study. The main limitation was the very small sample size (N=10). Because the sample size was so small, the findings described above are tentative at best. Another limitation to this study was the length of time of the intervention. Ideally, the reading intervention would continue until the child is reading at grade level. However, because of the time constraints, it was limited to a much shorter time.

### Future Research

There are three main areas of this study that lend themselves to suggestions for future research: a larger sample size, refinement of some of the teaching strategies before duplicating the current study, and follow-up of these children in their homeroom classrooms upon completion of the study.

The current study only had 10 participants, limiting the validity of the results. It would be useful to see how the results may be affected by increasing the sample size. If this were to be done, the power of the results would be much more useful and would more clearly indicate the actual effectiveness of the program.

In addition, some of the teaching strategies used in the current study should be refined to include allowing more time for SuperSpeed 1000 (because the children loved it and they showed a lot of growth in the amount of high frequency words that became sight words while playing this game) and implementing the reading intervention program for at least 20 or more days of instruction so that children can reach grade-level reading.

Finally, it would be useful to go into the homeroom classrooms of these children that were in both the control and intervention groups to assess the "staying power" of

the interventions after completion of the study. This way, it could be determined which reading intervention program (the Arkansas Model or the current design) is more likely to truly affect the child's ability to read in their homeroom during their normal reading instructional time.

### Implications and Conclusions

Reading intervention programs that are based on the current research similar to this one should be considered the standard, not the exception. The findings of this reading intervention causes one to wonder where reading intervention programs are headed. There is no purpose in implementing a reading program that is not going to be effective for the children in that program. For this reason, there could be possible benefits in replicating this study (or others like it) with a much larger sample size which would clarify the results in the current study.

Although the time a child spends reading is vital to their reading growth and development, it is not the only thing that contributes to their success. The expectations are (and should be) placed on teachers to contribute in a strategic way to each child's reading development. As important as it is to have a teacher who is determined to support each child to the best of his or her ability, it

is equally important that the teacher be educated and trained in effectively implementing a research-based reading intervention program. Regardless of the strength of any teacher's intuition when it comes to meeting the needs of individual students and being able to effectively take hold of a "teachable moment," each teacher still needs to have a research-based reading program that they follow and rely on in teaching reading to children.

In addition to having a research-based reading program as the foundation for reading instruction, it is vital for each teacher to insure that they are implementing it as designed. Similar to what took place in the current study, it is unfortunately very easy to implement a reading program that is believed to be research-based but that upon closer examination is not being implemented as designed and therefore it will not produce the results that the children deserve.

The importance of implementing a blended and balanced approach to reading instruction, which includes components of both phonics and whole language instruction, is also crucial. The current intervention group received a balanced approach to reading instruction; however, the reading instruction that the control group received had a strictly phonics emphasis. The current research is in

support of similar findings (Brooks-Harper & Shelton, 2000; Donat, 2006) and lays the groundwork for future research to be done which involves components of both phonics and whole language instruction.

If reading instruction at school does not improve in quality (i.e. reading programs based on current research), there are tremendous consequences for both the individual and society. When children are not successful in school, they are much more likely to drop out before graduation than if they are successful. For example, seventy to eighty-two percent of prison inmates are school dropouts and sixty percent of inmates are illiterate to semiliterate (National Institute for Literacy, Correctional Education Facts, [nifl.gov/nifl/facts/correctional.html](http://nifl.gov/nifl/facts/correctional.html)). These students drop out of school in part because they cannot read, which affects the entire report card. If the graduation rate can be changed so will the prison population; and this will be what changes American society (Trelease, 2006).

Clearly reading is a *most* important factor in today's society:

The more you read, the more you know. The more you know the smarter you become. The smarter you become the longer you stay in school. The longer you stay in



school the more diplomas you earn and the longer you are employed, therefore, the more money you will earn in a lifetime. The more diplomas you earn, the higher your children's grades will be in school. Finally, the more diplomas you earn, the longer you will live. (Trelease, 2006, p. xxv)

APPENDIX A  
STUDENT ASSESSMENT SCORES

### **Student Assessment Scores**

Student Number: _____	Pre-Assessment	Post Assessment
BPST III	____/91 ____%	____/91 ____%
Phonemic Awareness	____/90 ____%	____/90 ____%
SuperSpeed 1000 (2 <sup>nd</sup> Grade 90)		
DRA (12-18)		
Home Questionnaire	Y/N	

### **Student Assessment Scores**

Student Number: _____	Pre-Assessment	Post Assessment
BPST III	____/91 ____%	____/91 ____%
Phonemic Awareness	____/90 ____%	____/90 ____%
SuperSpeed 1000 (2 <sup>nd</sup> Grade 90)		
DRA (12-18)		
Home Questionnaire	Y/N	

### **Student Assessment Scores**

Student Number: _____	Pre-Assessment	Post Assessment
BPST III	____/91 ____%	____/91 ____%
Phonemic Awareness	____/90 ____%	____/90 ____%
SuperSpeed 1000 (2 <sup>nd</sup> Grade 90)		
DRA (12-18)		
Home Questionnaire	Y/N	

APPENDIX B  
BASIC PHONICS SKILLS TEST III

# Basic Phonics Skills Test III (BPST III)

## Description

The Basic Phonics Skills Test was developed by John Shefelbine to assess relatively quickly students' knowledge of a broad range of phonics skills beginning with consonant sounds normally taught in kindergarten and ending with polysyllabic word patterns encountered in third and fourth grade. The BPST is an informal test of (a) high-utility, spelling-sound relationships for reading single-syllable words and (b) syllabic and morphemic strategies for reading polysyllabic words. It is best used in conjunction with other kinds of assessments including graded passages, graded word lists, and measures of phoneme awareness (especially blending and segmentation).

The latest version of the BPST, the BPST III, directly assesses consonant sounds and names, short vowel sounds, and words representing the following 12 kinds of patterns: (a) short vowels with consonants (CVC), (b) short vowels with consonant digraphs (sh, ch, th, wh), (c) short vowels with consonant blends (st, sn, fl), (d) short vowels with inflectional endings (ed, ing), (e) final e (fine), (f) long vowel digraphs (lvd) (team), (g) r-controlled (r-c) (hurt), (h) other vowel digraphs and diphthongs (ovd) (boil), (i) two-syllable words, (j) polysyllabic words with affixes, (k) 3-4 syllable words, and (l) 3-5 syllable words. Students' responses can also be used to indirectly evaluate their knowledge of blending and the alphabetic nature of reading in English. [Note that changes from the BPST-II involved adding an extra line of more difficult polysyllabic word, replacing some polysyllabic words that students might know at sight, and making some single-syllable words more representative of a variety of consonant sounds.]

The BPST-III is most informative when students are reading below a fourth grade level on a graded word list such as the San Diego or on graded passages. At fourth grade reading levels and above, students typically do quite well because they have mastered basic phonics skills.

## When to Give

We recommend that the BPST-III be given to all students in grades kindergarten through second. It should be required for all K-2 students who are not proficient on benchmark measures of reading comprehension and "below-proficient" 3-6 students with graded word lists scores (such as the San Diego) below 4<sup>th</sup> grade.

## Materials

You will need to prepare two sets of materials: (a) multiple copies of the recording sheet on which you will write the students' responses and (b) a copy of the student sheet cut into three sections and pasted on three 5x7 cards from which the students will read the content of the test. The contents of the three cards should be:

- Card 1 - - consonants, short vowels, words with short vowels and consonants (cvc patterns), and words with short vowels and consonant digraphs,
- Card 2 - - consonant blends, inflectional endings, and final e, long vowel digraphs, r-controlled, and other vowel digraphs; and
- Card 3 - - all the remaining polysyllabic words.

## Administration

When giving the test, it is important that you place the recording sheet on a clipboard and hold it at an angle so students do not have to watch you write down their answers. Present the 5x7 cards, one at a time. Use a fifth blank card to help students look at just one row at a time and to keep them from getting discouraged by the words that follow. Record answers as directed on the recording sheet.

As students respond, give them neutral feedback by complimenting them on their effort rather than giving hints as to whether they were right or wrong. At no time should you give the students the answer since this entails teaching the test and limits its future usefulness.

**Introduce the assessment.** SAY: "I am going to have you tell me the sounds of some letters and read some words. I cannot give you any help because I need to see what you can do by yourself. This will help me decide what I need to teach you. Don't worry if you cannot read some of the words."

**Consonant sounds and names.** SAY: "Tell me the sound of each of these letters." Record responses as directed. Note distorted sounds (for example, "fuh") but still count them as correct. After covering all the consonant sounds, consider skipping their names if 10 or more sounds were correct but ask the names of any consonants that were missed.

**Short vowels.** SAY: "Tell me the sounds of these letters." If the students give you the name of the letter, ask them if they know another sound. [Note to the teacher: The short vowel sounds are the ones you hear at the beginning of at, ed, in, on, up.]

**Word reading (a - l).** SAY: "Read these words." Consider stopping when the total number correct on two consecutive rows is 0-1. Record incorrect answers above the words as directed on the response sheet.

## Interpretation and Instructional Implications

1. Row totals below 80% correct suggest a possible problem [less than 8/10 for (a) and 4/5 for (b)-(l)]. Highlight each category with scores below 80%.
2. Make an overall comparison of single-syllable versus polysyllabic word recognition proficiency. For single-syllable words, it is helpful to combine similar patterns: short vowel = (a+b+c+d), long vowel = (e+f). Instructional priorities do not necessarily follow the sequence of patterns listed on the BPST-III. For single-syllable phonics (a-h), K-2 students need to revisit problem areas in the sequence followed by the adopted reading program. Older students in grade three and above may need to start with polysyllabic strategy instruction since those skills are so critical in the upper grades. In such instances, single-syllable patterns that need attention are taught "on the side" during polysyllabic strategy instruction.
3. Examine polysyllabic errors to see if any are "legitimate" pronunciations, such as mom-ent for "moment." In order to be legitimate, all letters in the two versions have to match or line up. Students may mispronounce polysyllabic words because they have never heard of them before. Students with many legitimate polysyllabic word reading errors need vocabulary development rather than more decoding instruction.

**BPST-III - Basic Phonic Skills Test** Recording Sheet (For students reading below a 4th grade decoding level)  
John Shefelbine, California State University, Sacramento, Fall 2006

Name \_\_\_\_\_ Date \_\_\_\_\_ Grade \_\_\_\_\_ Evaluator \_\_\_\_\_

**Consonant sounds and names:** Record sounds on top of each letter and names under each letter; do all sounds before doing letter names; you might skip names for sounds that are correct; mark correct answers with ✓, incorrect answers with actual response, and no response with NR; note which sounds are distorted, e.g., "fuh."

m s f l r n h v w z (continuous sounds)

b c d g p t j k y x q (stop sounds) /21

**Short vowel sounds:** "Tell me the sounds of these letters." If the students give a long vowel sound, prompt them by asking if they know another sound. Do not specifically ask for short vowel sounds. Record incorrect answers with actual response or NR if no response. Mark on top with ~ for short, · for long. Since you are only interested in the short vowel sounds, there is no need to prompt students if they do not give the long sounds.

i o a u e /5 short

**Reading words with phonic patterns:** Record incorrect answers with actual response or NR.

Note: Consider stopping when **total** number correct on **two consecutive rows** is 0-1.

- |    |            |             |              |             |                |  |
|----|------------|-------------|--------------|-------------|----------------|--|
| a) | van        | mop         | fell         | sun         | fix            |  |
|    | lot        | kid         | hug          | wet         | map            | <span style="border: 1px solid black; padding: 2px;">/10 short</span>  |
| b) | chin       | bath        | when         | shut        | song           | <span style="border: 1px solid black; padding: 2px;">/5 cd</span>      |
| c) | left       | must        | frog         | flip        | snack          | <span style="border: 1px solid black; padding: 2px;">/5 c blind</span> |
| d) | filled     | letting     | rested       | passes      | licked         | <span style="border: 1px solid black; padding: 2px;">/5 inflect</span> |
| e) | fine       | hope        | cute         | kite        | rake           | <span style="border: 1px solid black; padding: 2px;">/5 final e</span> |
| f) | soap       | leak        | pain         | feed        | ray            | <span style="border: 1px solid black; padding: 2px;">/5 lvd</span>     |
| g) | burn       | fork        | dirt         | part        | serve          | <span style="border: 1px solid black; padding: 2px;">/5 r-c</span>     |
| h) | coin       | soon        | round        | lawn        | foot           | <span style="border: 1px solid black; padding: 2px;">/5 ovd</span>     |
| i) | silent     | ladder      | napkin       | polite      | cactus         | <span style="border: 1px solid black; padding: 2px;">/5 2-syl</span>   |
| j) | distrust   | useful      | unfair       | hardship    | nonsense       | <span style="border: 1px solid black; padding: 2px;">/5 affixes</span> |
| k) | volcano    | potato      | electric     | frequently  | combination    | <span style="border: 1px solid black; padding: 2px;">/5 3-4 syl</span> |
| l) | unflavored | intelligent | organization | convertible | representative | <span style="border: 1px solid black; padding: 2px;">/5 3-5 syl</span> |

**Instructional recommendations:**

m s f l r n h v w z

b c d g p t j k y x q

i o a u e

van	mop	fell	sun	fix
lot	kid	hug	wet	map
chin	bath	when	shut	song
left	must	frog	flip	snack
filled	letting	rested	passes	licked
fine	hope	cute	kite	rake
soap	leak	pain	feed	ray
burn	fork	dirt	part	serve
coin	soon	round	lawn	foot
silent	ladder	napkin	polite	cactus
distrust	useful	unfair	hardship	nonsense
volcano	potato	electric	frequently	combination
unflavored	intelligent	organization	convertible	representative

Reference:

Shefelbine, J. (2006). California State University, Sacramento.



APPENDIX C  
PHONEMIC AWARENESS SKILL TEST

### **Instructions for Phonemic Awareness Assessment**

There are a total of six phonemic awareness skills that are assessed in this assessment: phoneme isolation, phoneme identity, phoneme deletion, phoneme blending, phoneme segmentation, and phoneme categorization.

Each assessment has its own set of directions, modeling, practice time, assessment, and scoring. There is a final page for all of the child's scores to be written and a total score is documented for that child.

There are total of 90 points possible on this assessment with each skill being worth at least 10 points. Phoneme segmentation is worth 30 points and phoneme isolation is worth 20 points.

During the practice portion on each individual assessment, it is encouraged to practice with the child until they are completely aware of what is expected of them. If that requires creating impromptu practice examples beyond the one that is provided that is okay. Do not begin the individual assessments until the child is fully aware of what will be expected.

## Phoneme Blending

Students listen to a sequence of separately spoken sounds, then combine the sounds to form a word.

### Directions:

Teacher: "Let's play Guess My Word. I'm going to say a word but I'm going to say it slowly. I want you to see if you can guess the word I'm trying to say. For example, can you guess this word? /s/ /a/ /t/." (sat)

### Model:

Teacher: "If I say /p/ /i/ /g/ the word is . . . pig."

### Practice:

Teacher: "Let's practice one more time. Try to put the sounds together with me. If I say /c/ /a/ /t/ what would you say?" (cat)

### Assess:

Listen to these sounds and tell me the word they make.

	Sounds	Word	Child's Response	
			If incorrect word is provided write it on line	
1.	/m/ /ee/	me	correct	Incorrect: _____
2.	/b/ /e/ /d/	bed	correct	Incorrect: _____
3.	/h/ /a/ /t/	hat	correct	Incorrect: _____
4.	/m/ /u/ /s/ /t/	must	correct	Incorrect: _____
5.	/sh/ /o/ /p/	shop	correct	Incorrect: _____
6.	/p/ /l/ /a/ /n/ /t/	plant	correct	Incorrect: _____
7.	/s/ /t/ /o/ /p/	stop	correct	Incorrect: _____
8.	/f/ /l/ /ow/ /er/	flower	correct	Incorrect: _____
9.	/l/ /u/ /n/ /ch/	lunch	correct	Incorrect: _____
10.	/s/ /t/ /r/ /a/ /n/ /d/	strand	correct	Incorrect: _____

Number correct (out of 10) \_\_\_\_\_ Percentage Score \_\_\_\_\_

### References:

Klein, A. (2010). Teams Educational Resources. <http://teams.lacoe.edu/reading/assessments/assessments>  
Reading Rocket. (2010). [www.readingrockets.org/firstyear/assessment\\_phon.pdf](http://www.readingrockets.org/firstyear/assessment_phon.pdf)  
Ruscoe, K. A. (2003) Cool Tools Informal Reading Assessments. Project Central.  
<http://www.paec.org/itrk3/files/pdfs/readingPdfs/coolToolsAll.pdf>

## **Phoneme Categorization**

Students recognize the word in a set of three or four words that has the “odd” sound.

### **Directions:**

Teacher: “Let’s play a game called Odd One Out. I’m going to say three words. I want you to tell me which of the three words does not belong with the others based on the sounds in those words. For example, can you tell me which word does not belong: dog, door, and room?” (room).

### **Model:**

Teacher: “If I say: bee, tree, and wood; the correct answer is wood because bee and tree both end in the /ee/ sound.”

### **Practice:**

Teacher: “Let’s practice one more time. Now try to tell me which word does not belong: box, cat, boat.” (cat)

### **Assess:**

Listen to these words and tell me the word that does not belong.

	Words	Word	Child’s Response If incorrect word is provided write it on line	
1.	bus, bun, rug	rug	correct	Incorrect: _____
2.	candle, gutter, cook	gutter	correct	Incorrect: _____
3.	shake, ice, shave	ice	correct	Incorrect: _____
4.	car, window, way	car	correct	Incorrect: _____
5.	milk, butter, bug	milk	correct	Incorrect: _____
6.	shoe, puppy, shock	puppy	correct	Incorrect: _____
7.	ran, cat, mat	ran	correct	Incorrect: _____
8.	red, bed, ten	ten	correct	Incorrect: _____
9.	sag, tag, map	map	correct	Incorrect: _____
10.	eat, street, stop	stop	correct	Incorrect: _____

**Number correct (out of 10)** \_\_\_\_\_ **Percentage Score** \_\_\_\_\_

### **References:**

Lockhart C., (2010) Reading Horizons at Home. [http://www.readinghorizonsathome.com/dyslexic\\_assessment/downloads/Dyslexic\\_Assessment.pdf](http://www.readinghorizonsathome.com/dyslexic_assessment/downloads/Dyslexic_Assessment.pdf)

### **Phoneme Deletion**

Students recognize the word that remains when a sound is removed from a word.

#### **Directions:**

Teacher: "Let's play another word game called Delete it! I'm going to tell you to delete a sound from a word. I want you to say the word without the sound I tell you to delete. For example, if I asked you to delete the /f/ from "fan," what would you say?" (an)

#### **Model:**

Teacher: "If I ask you to delete the /t/ from "tote" you would say, "oat" because that is what "tote" without the /t/ sounds like."

#### **Practice:**

Teacher: "Let's practice one more time. Say GOAT. (goat). Now say it again without the /t/." (go)

#### **Assess:**

\*Follow practice format when performing assessment.

	Say	Delete	Correct	Child's Response	
				If incorrect word is provided write it on line	
1.	Rose	/z/	Row	correct	Incorrect: _____
2.	Train	/n/	Tray	correct	Incorrect: _____
3.	Seat	/t/	Sea	correct	Incorrect: _____
4.	Bake	/k/	Bay	correct	Incorrect: _____
5.	Inch	/ch/	In	correct	Incorrect: _____
6.	Smile	/s/	Mile	correct	Incorrect: _____
7.	Feet	/f/	Eat	correct	Incorrect: _____
8.	Boat	/b/	Oat	correct	Incorrect: _____
9.	Lake	/l/	Ache	correct	Incorrect: _____
10.	Hand	/h/	And	correct	Incorrect: _____

Number correct (out of 10) \_\_\_\_\_ Percentage Score \_\_\_\_\_

#### **References:**

Reading Rocket (2010). [www.readingrockets.org/firstyear/assessment\\_phon.pdf](http://www.readingrockets.org/firstyear/assessment_phon.pdf)  
Ruscoe, K.A. (2003) Cool Tools Informal Reading Assessments. Project Central.  
<http://www.paec.org/itrk3/files/pdfs/readingPdfs/coolToolsAll.pdf>

## Phoneme Identity

Students recognize the same sounds in different words.

### Directions:

Teacher: "Let's play another word game called What's the Same? I'm going to say three words. I want you to tell me the sound that is the same in all three words. For example, if I say low, open, and soap what sound is the same in all three words?" (/o/)

### Model:

Teacher: "If I say the words fire, laugh, and fall the sound that is the same in all three words is /f/."

### Practice:

Teacher: "Let's practice one more time. What sound is the same in sand, sail, and grass?" (/s/)

### Assess:

\*Follow practice format when performing assessment.

	Words	Similar Sound	Child's Response	
			If incorrect sound is provided write it on line	
1.	Tail, top, tea	/t/	correct	Incorrect: _____
2.	Quick, lake, corn	/k/	correct	Incorrect: _____
3.	Farm, leaf, afraid	/f/	correct	Incorrect: _____
4.	Leap, hill, glow	/l/	correct	Incorrect: _____
5.	Plus, spray, pants	/p/	correct	Incorrect: _____
6.	Big, rubber, tub	/b/	correct	Incorrect: _____
7.	Run, marry, write	/r/	correct	Incorrect: _____
8.	Go, egg, get	/g/	correct	Incorrect: _____
9.	Chip, match, chain	/ch/	correct	Incorrect: _____
10.	Thumb, thin, thing	/th/	correct	Incorrect: _____

**Number correct (out of 10)** \_\_\_\_\_ **Percentage Score** \_\_\_\_\_

### References:

Sebastian, W. & Watts, J. (2002) Abecedarian Reading Assessment.  
<http://www.balancedreading.com/assessment/abecedarian.pdf> Page 8-13

## Phoneme Isolation

Students recognize individual sounds in a word.

### Directions:

Teacher: "Let's play another word game called What do You Hear? I will say a word. Listen to the ending and beginning sounds of each word. Tell me the sound that you hear. For example, if I say wood, you would tell me that /w/ is the beginning sound and /d/ is the ending sound."

### Model:

Teacher: "If I say, what are the beginning and ending sounds in the word "sit?" You would say the /s/ sound is at the beginning and the /t/ sound is at the end the word."

### Practice:

Teacher: "Let's practice one more time. Say the word "pig" with me. (pig) What sound do you hear at the beginning of pig? (/p/). What sound do you hear at the ending of pig?" (/g/)

### Assess:

\*Follow practice format when performing assessment.

	Say	Beg.	Child's Response If incorrect sound is provided write it on the line		End.	Child's Response If incorrect sound is provided write it on the line	
1.	Tell	/t/	correct	Incorrect: _____	/l/	correct	Incorrect: _____
2.	Door	/d/	correct	Incorrect: _____	/r/	correct	Incorrect: _____
3.	Make	/m/	correct	Incorrect: _____	/k/	correct	Incorrect: _____
4.	Food	/f/	correct	Incorrect: _____	/d/	correct	Incorrect: _____
5.	Beds	/b/	correct	Incorrect: _____	/s/	correct	Incorrect: _____
6.	An	/a/	correct	Incorrect: _____	/n/	correct	Incorrect: _____
7.	Pie	/p/	correct	Incorrect: _____	/i/	correct	Incorrect: _____
8.	Bath	/b/	correct	Incorrect: _____	/th/	correct	Incorrect: _____
9.	wish	/w/	correct	Incorrect: _____	/sh/	correct	Incorrect: _____
10.	Go	/g/	correct	Incorrect: _____	/o/	correct	Incorrect: _____

**Number correct (out of 20) \_\_\_\_\_ Percentage Score \_\_\_\_\_**

### References:

Ruscoe, K.A. (2003) Cool Tools Informal Reading Assessments. Project Central.

<http://www.paec.org/itrk3/files/pdfs/readingPdfs/coolToolsAll.pdf>

Klein, A. (2010). Teams Educational Resources. <http://teams.lacoe.edu/reading/assessments/assessments.html>

### Phoneme Segmentation

Students break a word into its separate sounds.

#### Directions:

Teacher: "Let's play a word game called Break it Up! I'm going to say a word and I want you to break the word apart into sounds. You are going to slowly tell me each sound in the word while taking a breath between each sound you make. For example, if I say toy, you will slowly say, /t/ /oy/."

#### Model:

Teacher: "If I said the word "cat," you would say /c/ /a/ /t/ while pausing between each sound. Let's try another."

#### Practice:

Teacher: "Let's practice one more time. Say the word "hat" (student says hat). Now let's slowly say the sounds; /h/ pause (student says /h/ and pauses); /a/ pause (student says /a/ and pauses); /t/ (student says /t/)."

#### Assess:

\*Follow practice format when performing assessment.

	Word	Circle the sounds said by the child	Points earned per word	If completely incorrect write what child said
1.	pig	/p/ /i/ /g/	/3	Incorrect: _____
2.	at	/a/ /t/	/2	Incorrect: _____
3.	bag	/b/ /a/ /g/	/3	Incorrect: _____
4.	sun	/s/ /u/ /n/	/3	Incorrect: _____
5.	pop	/p/ /o/ /p/	/3	Incorrect: _____
6.	name	/n/ /ae/ /m/	/3	Incorrect: _____
7.	ship	/sh/ /i/ /p/	/3	Incorrect: _____
8.	sock	/s/ /o/ /k/	/3	Incorrect: _____
9.	chin	/ch/ /i/ /n/	/3	Incorrect: _____
10.	sand	/s/ /a/ /n/ /d/	/4	Incorrect: _____

Number correct (out of 30) \_\_\_\_\_ Percentage Score \_\_\_\_\_

#### References:

- Yopp, H. (2010). Teams Educational Resources. Yopp-Singer Test of Phonemic Segmentation.  
<http://teams.lacoe.edu/reading/assessments/assessments.html>  
Reading Rocket (2010). [www.readingrockets.org/firstyear/assessment\\_phon.pdf](http://www.readingrockets.org/firstyear/assessment_phon.pdf)  
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<http://www.paec.org/itrk3/files/pdfs/readingPdfs/coolToolsAll.pdf>

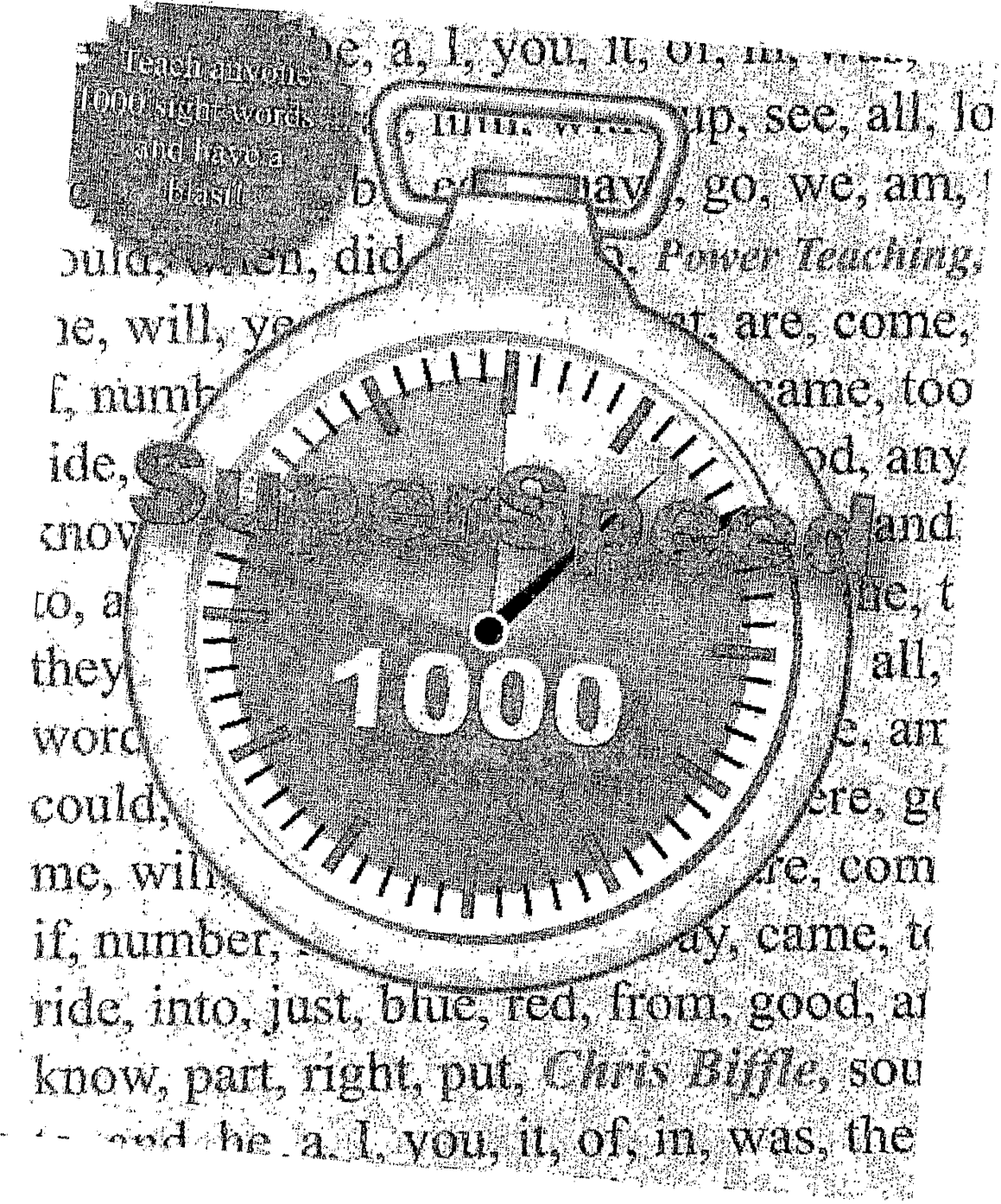


**Student Score Sheet**

Name/Number: \_\_\_\_\_ Date: \_\_\_\_\_

Phonemic Awareness Skill (by order of difficulty)	Possible Points	Student Points	Percentage Score
Phoneme Isolation	20		
Phoneme Identity	10		
Phoneme Categorization	10		
Phoneme Blending	10		
Phoneme Deletion	10		
Phoneme Segmentation	30		
Total Points	90		

APPENDIX D  
SUPERSPEED 1000



# ≈ SuperSpeed 1000 ≈

A Power Teaching  
Sight Word Reading Game

Chris Biffle

Crafton Hills College

Yucaipa, California

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For more information about SuperSpeed products  
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## ≈ INTRODUCTION ≈

**POWER TEACHERS OF SOUTHERN CALIFORNIA** is a grass roots education reform organization founded by three instructors (Chris Biffle, Jay Vanderfin, Chris Rekstad) in 1999. Since that time, we have presented free teaching seminars to over 3, 500 educators representing over 120,000 students. So far as we can tell, our classroom management conferences, offered four times a year at Crafton Hills College in Yucaipa, California, are among the largest in the United States.

Videos illustrating our teaching strategies are available at:

<http://www.youtube.com/ChrisBiffle>

and

<http://www.teachertube.com/uprofile.php?UID=32259>

More about our organization can be found at

<http://www.powerteachers.org/Home.html>

In addition to offering education seminars, we also develop low cost teaching materials focused on core knowledge (the state standards) and basic skills (reading, writing and math.) Central to our approach is a great deal of educational tomfoolery which produces some of the sweetest sounds teachers ever hear, on task laughter.

SuperSpeed 1000 is a game designed to teach readers 1000 sight words. Versions of this game have been successfully classroom tested by hundreds of students since 1999.

Sight words, like “the, to, and, of”, are the most common words in English. Only 100 sight words make up over 50% of all the words students read! If these words cannot be read quickly, at a rate of at least 90 words per minute, by the end of 3rd grade, students’ odds of success in the rest of their education are significantly diminished. The more rapidly students can read sight words, the greater their reading fluency and pleasure.

SuperSpeed 1000 is appropriate for readers from 3rd grade through 12th. In addition, the game adapts superbly to the needs of English learners, including adults who are taking a beginning reading course.

If you let your students play SuperSpeed 1000 for only a few minutes, several times a week, you’ll see substantial improvements in overall reading speed; gains of 20% -40% within a month are not uncommon.

SuperSpeed 1000 is so entertaining that many teachers have used it as a reward for good behavior! Students work hard in class, to gain the privilege of playing SuperSpeed!!

The words in SuperSpeed 1000 are arranged in order of frequency. “The” is the most common word in English, and thus it is the first word

read. “To” is the next most common word in English and is the second word read, and so forth. The 1000 words in SuperSpeed 1000 are a compilation of the well known Dolch and Frye lists, but are not arranged in an order identical to either.



## ≈ HOW TO PLAY SUPERSPEED 1000 ≈

Playing SuperSpeed 1000 is quite simple. Arrange your class in groups of twos. If you have an odd number of students, you will pair with the extra student. Without telling your pupils be sure that a weaker reader is always paired with a stronger reader.

After you hand out the SuperSpeed 1000 word list (see page 8) say something like the following, to your students, “We’re going to play SuperSpeed, a game you’ll love! When I say ‘go!’, one person on your team reads the first word, then the other person on the team reads the next word, and so on. Keep taking turns. If your partner doesn’t know a word, or mispronounces it, ‘helpsies’ is allowed. Say the word for him or her. Keep taking turns, reading as fast as you can. I’ll say ‘stop!’ after a minute. Mark your team’s record on the page; then I’ll give you another try for a minute. Start over with the first word you read, but this time your partner goes first and you go second. Your partner reads the first word, you read the second word, and so forth. If you beat your team record after a minute, give yourselves a merry cheer. Now, explain some of the rules of SuperSpeed 1000 to each other.”

After you students have explained the game to each other, add the following.

“On the SuperSpeed 1000 list you’ll occasionally see underlined italics words called *zingers*. Every zinger is a nonsense word like *splootz!* or *zoink!* When you finish playing, count up the number of zingers your team read when you set your best team record. Every zinger gives you a five word bonus. So, if your team read two zingers, then the next time you play, you can start 10 words from your previous starting place. For example, if you began at the first word ‘the’ and read through two zingers, then you earn a two bonuses and next time you can start 10 words further on, with word ‘was.’ Tell each other how much you love those nonsense. bonus zingers!”

*Only one additional rule needs to be added.*

*When players break personal records, they should place a checkmark inside a new personal record star on page 18.* You may be surprised at how much your students enjoy creating, and sharing!, a visual record of their own achievements.

Students love setting and breaking records and also, for some reason, they love nonsense words. Virtually every time a team plays, they will break a previous record, and will often spontaneously cheer. Zingers give them an excuse to be silly and, because they are scattered through

SuperSpeed 1000; teams have additional incentives, besides trying to break a record, for reading quickly. “Look, there’s a zinger down there ... we’ve got to get to it.” Zingers also automatically move players forward through the game, so that they are always reading a few words more than the previous time they played. The repetitive structure of SuperSpeed 1000 assures you that students receive plenty of practice on the most common sight words. Whenever students achieve a new starting level, and they will frequently, you should encourage them to give themselves a merry cheer (and put a checkmark inside a new personal record star on page 18).

Playing SuperSpeed 1000 is an ideal reward for good behavior in class. Wouldn’t you rather see your students eagerly mastering sight words than giving them candy? The game literally takes a few minutes ... and the most common comment we hear from teachers is “My class loves it!”

Students, effortlessly, receive hundreds of repetitions reading the most common sight words while setting and breaking team records. The goal is not to break another team’s record, but to surpass your own team’s previous best mark. Even better than increasing reading speed, players of SuperSpeed 1000 are rewarded with one of the most deeply powerful lessons in education: *I can set and break personal records. I can always do better than my own previous best.*

## ≈ ONE ON ONE TUTORIALS ≈

You can easily adapt SuperSpeed 1000 to the special needs of individual students. You can fill the role of the student's partner, as described above and take turns reading words. Or, for variety, simply have your students read the words on their own, as fast as possible. Encourage them to keep breaking personal records.

## ≈ SuperSpeed 1000 ≈

Directions: Make a team of two readers. Beginning at line 1 below, you read the first word and your partner reads the second word. Keep taking turns, reading as quickly as possible for a minute. When your team is finished, mark the last word you or your partner read. This is your team record. Play again for a minute, trying to break this record, but this time, your partner goes first. Your partner reads the first word, you read the second word, and so forth. At the end of a minute if your team beats your team record give a merry cheer.

Every underlined word in italics is a nonsense word called a **zinger**. For example, the first two zingers are *splootz!* (line 6) and *zoink!* (line 13.) Count the number of zingers your team reads when it sets its best team record. Each zinger gives your team a five word bonus. So, if your team read two zingers, then the next time you play you can begin 10 words from your previous starting place. For example, if you began at word "the" and read through two zingers, then you can start next time 10 words further on, with the word "was."

the, to, and, he, a, I, you, it, of, in, was, said,	1
his, that, she, for, on, they, but, had, at, him,	2
with, up, see, all, look, is, her, there, some,	3
word, out, as, be, each, have, go, we, am,	4
then, little, down, do, can, could, when,	5
did, what, so, <i><u>splootz!</u></i>	6
not, were, get, them, like, one, this, my,	7
would, me, will, yes, big, more, went, are,	8
come, if, number, now, long, no, way, came,	9
too, ask, very, than, an, over, yours, its, ride,	10
into, just, blue, red, from, good, any, about,	11

around, want, don't, how, know, part, right,	12
put, sound, <u>zoink!</u>	13
got, take, where, every, pretty, place, jump, green, four,	14
away, old, by, most, their, here, saw, call, after, well, <u>moop!</u>	15
think, name, ran, sentence, let, follow, help, make, going,	16
great, sleep, brown, yellow, you, through, other, walk, line,	17
since, or, before, mean, eat, same, again, home, play, who,	18
been, may, boy, <u>aggh!</u>	19
stop, off, never, also, seven, eight, form, set, cold, today,	20
goes, myself, round, set, tell, much, keep, give, large, work,	21
first, even, such, try, find, new, must, start, black, white,	22
turn, ten, does, bring, men, women, point, always, drink,	23
need, once, different, soon, made, move, run, gave, open,	24
has, hand, <u>yatz!</u>	25
only, picture, us, our, change, three, spell, air, better, hold,	26
buy, animal, house, page, write, letter, mother, father,	27
funny, warm, answer, ate, learn, full, small, those, done,	28
use, cried, say, light, pick, hurt, pull, cut, kind, both, high,	29
sit, near, add, food, between, which, below, plant, country,	30
fall, school, carry, <u>gleep-rumple!</u>	31

tree, under, read, why, own, found, wash, cold, hot, because,	32
far, live, draw, earth, eye, clean, grow, thought, head, best,	33
story, upon, these, sing, car, left, together, please, few, <u>dizzle!</u>	34
while, along, might, close, thank, wish, seem, man shall,	35
hard, laugh, example, begin, life, paper, group, often,	36
important, until, side, feet, <u>dorf!</u>	37
cows, it's, your, being, sun, questions, fish, dog, mark,	38
horse, birds, area, room, door, ship, table, farm, ground,	39
town, wood, road, box, friends, stars, street, building, red,	40
black, green, wheels, ocean, island, field, fire, waves, wind,	41
rock, space, however, low, hours, complete, products,	42
happened, whole, measure, remember, early during, short	43
better, best, listen, reached, covered, fast, several, hold,	44
himself, toward, true, step, morning passed, vowel, five,	45
ten, hundred, numeral, thousands, knew, north, south,	46
money, map, since, pulled, draw, voice, seen, slow, fast,	47
plan, notice, slowly, sing, war, ever, tall, king, piece, I'll,	48
unit, figure, certain, across, travel, told, today, upon, <u>bap!</u>	49
done, English, usually, half, pattern, fly, gave, didn't, finally,	50
wait, correct, oh, quickly, person, became, shown, <u>goinch!</u>	51
minutes, strong, verb, easy, front, feel, fact, inches, <u>rarlup!</u>	52

heard, decided, contain, course, surface, produce, order,	53
sure, class, note, nothing, rest, carefully, scientists, inside,	54
become, stay top, known, problem, week, less, machine,	55
base, ago, stood, <u>zingy-doingy!</u>	56
plane, system, behind, ran, round, boat, game, force,	57
brought, understand, warm, common, bring, explain,	58
dry, though, language, shape, deep, against, America,	59
dear, equation, yet, government, filled, heat, full, hot,	60
check, object, am, rule, among, noun, power, cannot, able,	61
six, size, dark, ball, material, special, heavy, fine, pair,	62
circle, include, built, <u>clickwaddle!</u>	63
can't, matter, square, syllables, perhaps, bill, felt, suddenly,	64
test, direction, center, farmers, ready, anything, divided,	65
general, energy, subject, Europe, moon, region, return,	66
believe, dance, members, picked, simple, cells, paint, mind,	67
love, cause, rain, exercise, eggs, train, blue, wish, <u>kizwiddy!</u>	68
drop, developed, window, difference, distance, heart, sit,	69
sum, summer, wall, forest, probably, <u>tazzzz!</u>	70
legs, sat, main, winter, wide, written, length, reason,	71
kept, interest, arms, brother, race, present, beautiful, store,	72
job, edge, past, sign, record, finished, discovered, wild,	73



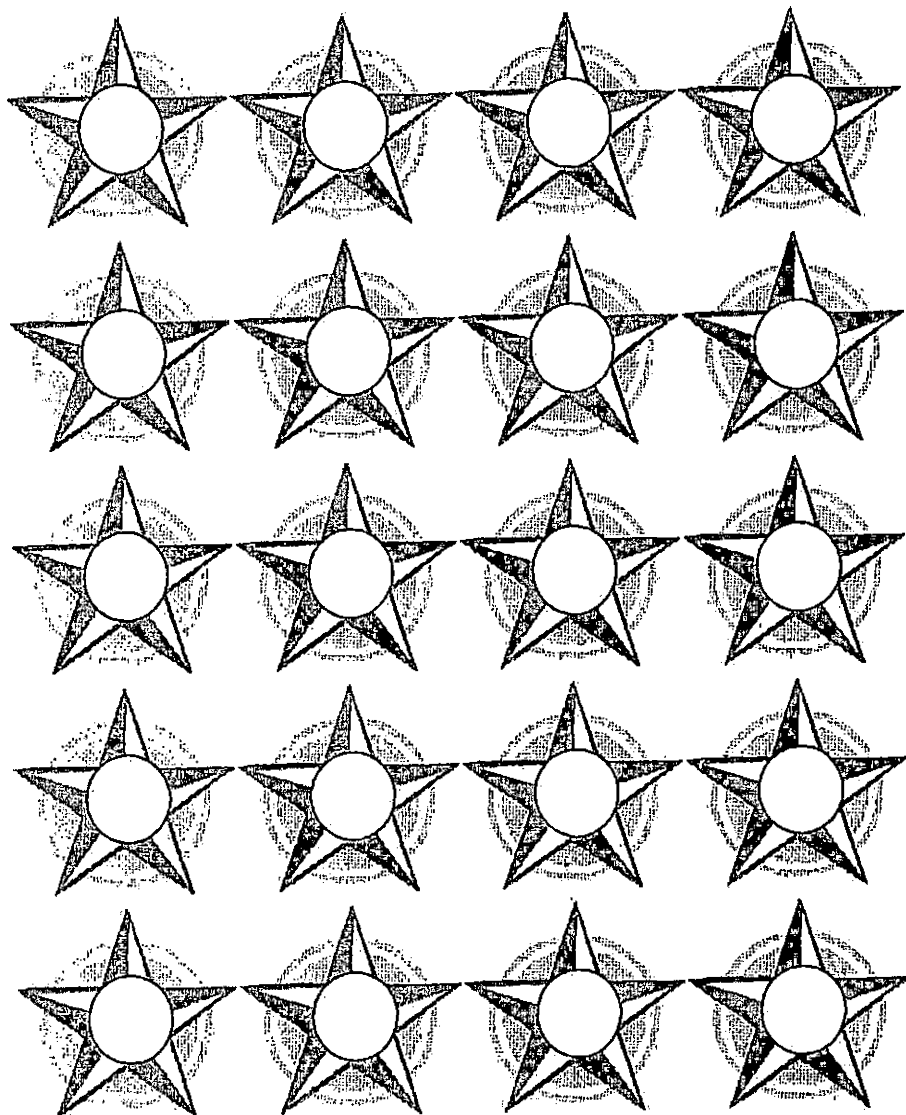
happy, beside, gone, sky, glass, million, west, lay, weather,	74
root, instruments, meet, third, months, paragraph, raised,	75
represent, soft, whether, clothes, flowers, shall, teacher,	76
held, describe, drive, <u>boing-gorplump!</u>	77
cross, speak, solve, appear, metal, son, either, ice, sleep,	78
village, factors, result, jumped, snow, ride, care, floor,	79
hill, pushed, baby, buy, century, outside, everything, tall,	80
already, instead, phrase, soil, bed, copy, free, hope, spring,	81
case, laughed, nation, quite, type, themselves, temperature,	82
bright, lead, everyone, method, section, lake, consonant,	83
within, dictionary, <u>flooooooop! moop! barloopy!</u>	84
hair, age, amount, scale, pounds, although, per, broken,	85
moment, tiny, possible, gold, milk, quite, natural, lot, stone,	86
act, build, middle, speed, count, cat, someone, sail, rolled,	87
bear, wonder, smiled, angle, fraction, Africa, killed,	88
melody, bottom, trip, hole, poor, let's, fight, surprise,	89
French, died, beat, exactly, remain, dress, iron, couldn't,	90
fingers, <u>zadayada!</u>	91
row, least, catch, climbed, wrote, shouted, continued, itself,	92
else, plains, gas, England, burning, design, joined, foot, law,	93
ears, grass, you're, grew, skin, valley, cents, key,	94

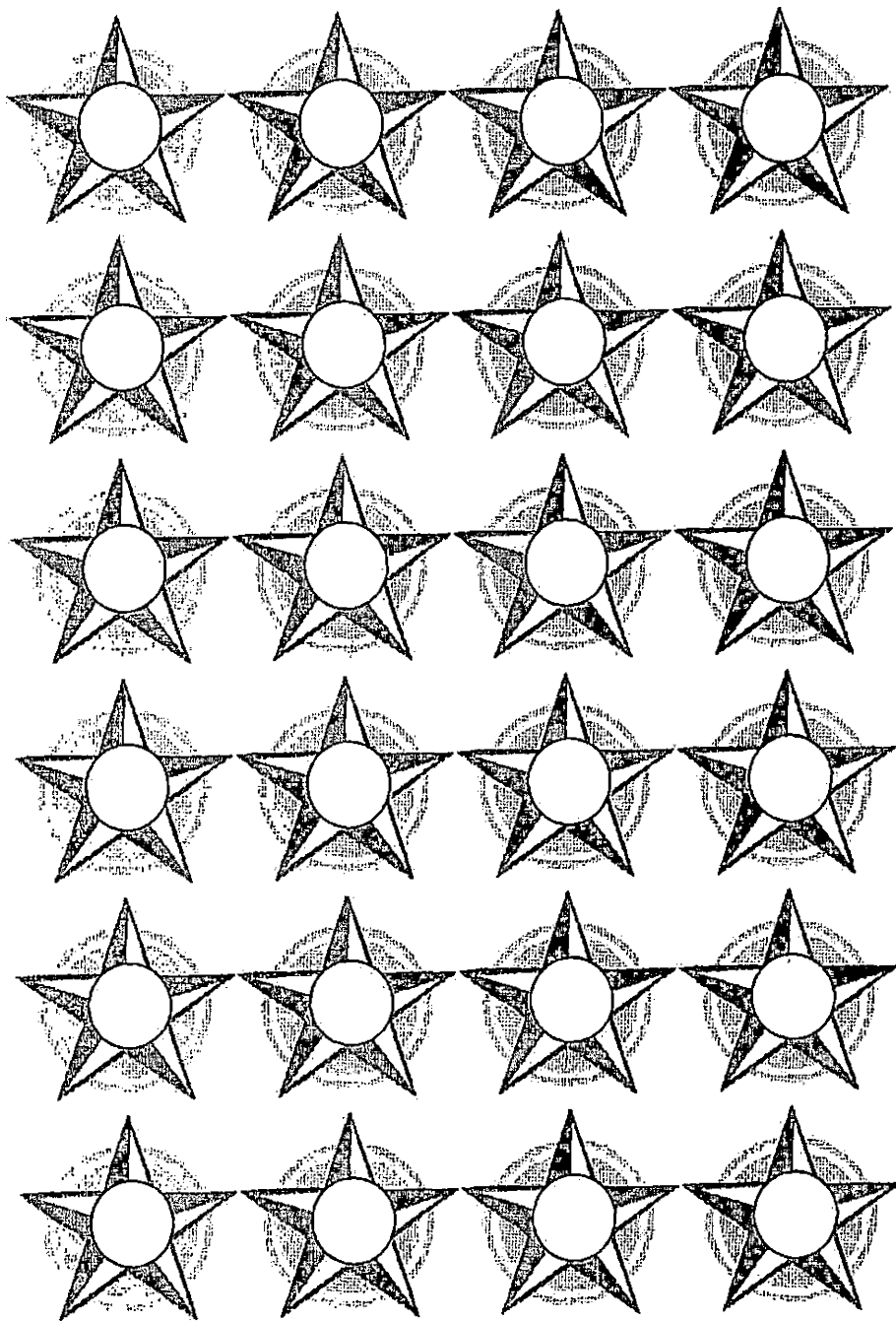
president, brown, trouble, cool, cloud, lost, sent, symbols,	95
wear, bad, save, experiment, engine, alone, drawing, east,	96
pay, single, touch, information, express, mouth, yard,	97
equal, decimal, <u>achooooo!</u>	98
yourself, control, practice, report, straight, rise, statement,	99
stick, party, seeds, suppose, woman, coast, bank, period,	100
wire, choose, clean, visit, bit, whose, received, garden,	101
please, strange, caught, fell, team, God, captain, direct,	102
ring, serve, child, desert, increase, history, cost, maybe,	103
business, separate, break, uncle, hunting, flow, lady,	104
students, human, art, feeling, <u>gehsundheit!</u>	105
supply, corner, electric, insects, crops, tone, hit, sand,	106
doctor, provide, thus, won't, cook, bones, tall, board,	107
modern, compound, mine, wasn't, fit, addition, belong,	108
safe, soldiers, guess, silent, trade, rather, compare, crowd,	109
poem, enjoy, elements, indicate, except, expect, flat,	110
seven, interesting, sense, string, blow, famous, value,	111
Washington, movement, pole, exciting, branches	112
thick, blood, lie, spot, bell, fun, loud, consider, suggested,	113
thin, position, entered, fruit, tied, rich, dollars, send, sight,	114
chief, Japanese, stream, planets, rhythm, eight, science,	115

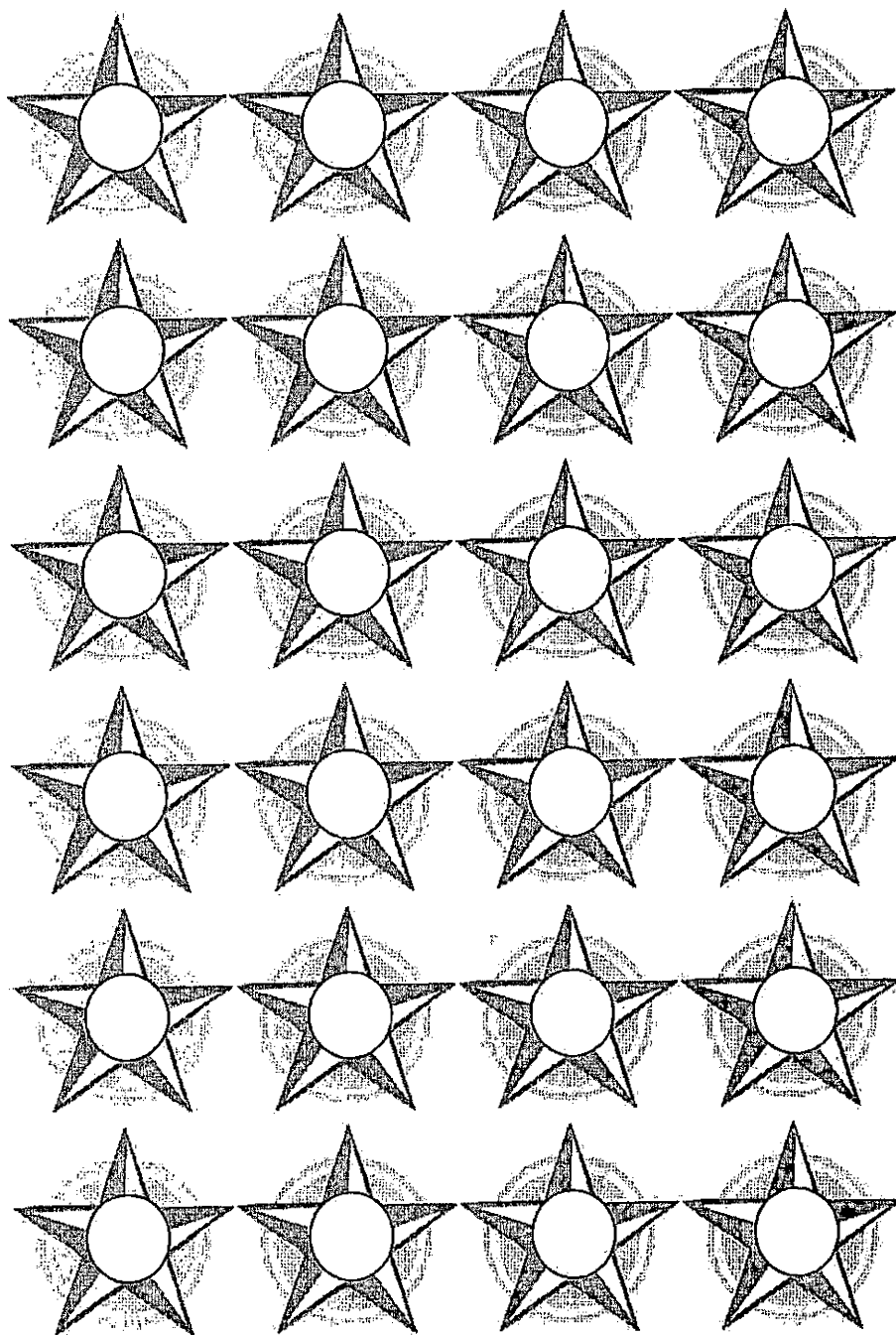
major, observe, tube, necessary, weight, meat, lifted,	116
process, army, hat, property, particular, swim, terms,	117
current, park, sell, shoulder, industry, wash, block, spread,	118
cattle, wife, sharp, <u>toimurph!</u>	119
company, radio, we'll, action, capital, factories, settled,	120
yellow, isn't, southern, truck, fair, printed, wouldn't,	121
ahead, chance, born, level, triangle, molecules, France,	122
repeated, column, western, church, sister, oxygen, plural,	123
various, agreed, opposite, wrong, chart, prepared, pretty,	124
solution, fresh, shop, suffix, especially, shoes, actually, nose,	125
afraid, dead, sugar, adjective, fig, office, huge, <u>noquixyrztl!</u>	126
gun, similar, death, score, forward, stretched, experience,	127
rose, allow, fear, workers, wings, Greek, Mrs., bought,	128
led, march, northern, create, British, difficult, match,	129
win, doesn't, steel, total, deal, determine, evening, nor,	130
rope, cotton, apple, details, entire, corn, substances, smell,	131
tools, conditions, stand, track, arrived, located, sir, seat,	132
division, effect, underline, view, <u>mxyytqlvvvrzmnnn!</u>	133

## ≈ SuperSpeed Personal Record Stars ≈

Place a checkmark in a star each time you break a personal record!







Notes:



Feb 28, 2011

This is to certify that Kinzi Franzwa  
has permission to use, and reproduce in its  
entirety "SuperSpeed 1000" in her masters  
thesis. If more information is needed,  
please contact me.

Chris Biffle  
CL Biffle  
909-389-3338



APPENDIX E  
RUNNING RECORD

## NAME: \_\_\_\_\_

TEXT LEVEL

TEACHER: \_\_\_\_\_

DATE: \_\_\_\_\_

Scores: RUNNING WORDS  
ERRORS

ERROR  
RATE

1:

ACG.

5/8

SC  
RATE

1:

☐ Easy 95-100%

Inst. 90-94%

Hard 50-89%

Information used or neglected  
[Meaning (M) Structure or Syntax (S)  
or Visual (V)]

CROSS CHECKING ON  
INFORMATION

(Note that this behavior changes over time)

		TOTALS		Information used	
PAGE	TITLE	E	SC	E MSV	SC MSV

APPENDIX F

HOME QUESTIONNAIRE AND BACKGROUND INFORMATION

## **Home Questionnaire & Background Information**

For the following questions please circle the answer that best describes your response.

1. How many reading materials do you have in the home?
  - a. 1-10
  - b. 11-50
  - c. 51-150
  - d. Over 150
2. How often do you read to/with your child?
  - a. Daily
  - b. 3-5 times per week
  - c. 1-2 times per week
  - d. Less than once per week
3. What types of reading materials are available in your home for your child to read?" (Circle all that apply)
  - a. Books
  - b. Magazines
  - c. Comic books
  - d. Other: \_\_\_\_\_
4. Who reads with your child on a regular basis? (circle all that apply)
  - a. Mother
  - b. Father
  - c. Grandparent
  - d. Sibling
  - e. Other: \_\_\_\_\_
5. How old was your child when you (or someone else) began reading to them?
  - a. Before Birth
  - b. Between birth and 1 year
  - c. Between 1 year and 2 years
  - d. Between 2 years and 4 years
  - e. After five years
  - f. Have not started yet
6. Mother - In what year were you born? \_\_\_\_\_
7. Father – In what year were you born? \_\_\_\_\_

8. What is your marital status (mother and father)?
- Now married
  - Widowed
  - Divorced
  - Separated
  - Never Married
9. Mother - What is the highest degree or level of school your have completed? If currently enrolled, mark the previous grade or highest degree received.
- No schooling completed
  - Nursery school to 8th grade
  - 9th, 10th or 11th grade
  - 12th grade, no diploma
  - High school graduate - high school diploma or the equivalent (for example: GED)
  - Some college credit, but less than 1 year
  - 1 or more years of college, no degree
  - Associate degree (for example: AA, AS)
  - Bachelor's degree (for example: BA, AB, BS)
  - Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)
  - Professional degree (for example: MD, DDS, DVM, LLB, JD)
  - Doctorate degree (for example: PhD, EdD)
10. Father - What is the highest degree or level of school your have completed? If currently enrolled, mark the previous grade or highest degree received.
- No schooling completed
  - Nursery school to 8th grade
  - 9th, 10th or 11th grade
  - 12th grade, no diploma
  - High school graduate - high school diploma or the equivalent (for example: GED)
  - Some college credit, but less than 1 year
  - 1 or more years of college, no degree
  - Associate degree (for example: AA, AS)
  - Bachelor's degree (for example: BA, AB, BS)
  - Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA)
  - Professional degree (for example: MD, DDS, DVM, LLB, JD)
  - Doctorate degree (for example: PhD, EdD)

11. Please specify your ethnic background.

- a. Hispanic or Latino
- b. Native American
- c. Asian
- d. African-American
- e. Caucasian/Euro-American
- f. Other: \_\_\_\_\_

APPENDIX G  
NO FUSS PLAY DOUGH

## **No Fuss Play Dough**

### **Ingredients:**

1 cup cold water  
1 cup salt  
2 teaspoons vegetable oil  
2 cups flour  
2 tablespoons cornstarch  
Food coloring

### **Directions:**

In a large bowl, mix together water, salt, oil and a few drops of food coloring. Mix flour and cornstarch and add 1/2 cup at a time, stirring constantly (you may need a little more or a little less than 2 cups flour so make sure you stir in until it is the right consistency). Knead for a few minutes with flour on your hands.

**Smelly Tip:** For nice smelling play dough, add a few drops of vanilla extract, almond extract, or peppermint extract to any of these play dough recipes.

### **Reference:**

Easy Kid Recipes, (2010). <http://www.easy-kids-recipes.com/play-dough-recipes.html>



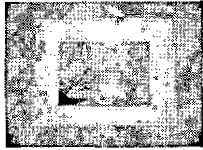
APPENDIX H

HOW TO MAKE A GREETING CARD ENVELOPE

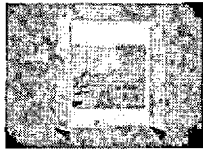
## How to Make a Greeting Card Envelope

### Steps:

1. Lay your card on a piece of 8 ½ x 11 paper. Center it horizontally but a little low.



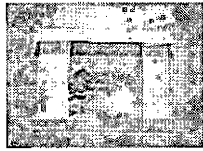
2. Fold the sides of the paper inwards. Leave a little room so the envelope will be a little larger than the card.



3. Press firmly on the edge of each fold so it lays down flat.



4. Do the same with the top and the bottom (remember to leave a little wiggle room).



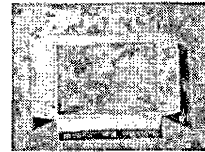
5. Now flatten out the paper and remove the card.



6. Time to snip off the corners. Make a cut slightly larger than 90 degrees.



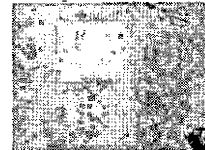
7. Do this for all four corners. Check that the card will fit inside still.



8. Put just a little dab of glue at the bottom of each side piece. Then fold the bottom up and press down.



9. Cut a new piece of paper slightly smaller than your envelope. This will be the back piece.



10. Glue carefully along the sides and bottom of the envelope, then place the back piece on and press down gently.



11. There you have it – the finished envelope! Put the card inside, then glue the top of the envelope closed.



### Reference:

Taylor, D. J., (2010). Wikihow.com. <http://www.wikihow.com/Make-a-Greeting-Card-Envelope>.

APPENDIX I  
PHONICS BASED BOARD GAMES

### **Board Games**

<b>Number</b>	<b>Game Title</b>	<b>Skill Reinforced</b>	<b>Publisher</b>
1	Alphabetical Order	Alphabetic Principal	Evan-Moor Corp. Literacy Centers. Take it to Your Seat. 2004.
2	Phonemic Awareness Folder Game Library	Phoneme Isolation Rhyming Beginning Sounds Syllable Counting	Lakeshore. 2010.
3	Ice Cream Party: A Phonics Game	Beginning Consonants	Frank Schaffer. School Specialty Publishing. 1998.
4	Learning Games: Initial Consonants	Beginning Consonants	McGraw-Hill Children's Publishing. 1997.
5	Beginning Sounds Bingo	Beginning sounds	Lakeshore. 2009.
6	Sound Match Game	Beginning Sounds Ending Sounds Rhyming	Lakeshore. 2009.
7	Rockin' Rhyme Game	Rhyming	Lakeshore. 2009.
8	How Is It Spelled	Long Vowels	Evan-Moor Corp. Literacy Centers. Take it to Your Seat. 2004.
9	Ladybug, Ladybug: A Phonics Game	Short Vowels Rhyming Words	Frank Schaffer. School Specialty Publishing. 1998.
10	Learning Games: Short and Long Vowel	Short Vowels Long Vowels	McGraw-Hill Children's Publishing. 1997.
11	Keeper of the Castle	Long Vowels	Lakeshore. 2008.
12	Jet Boat Harbor	Short Vowels Phoneme Blending	Lakeshore. 2008.
13	Making and Breaking: Fluent Level	Rhyme Phoneme Segmenting	Smart Kids Educational Resources. 1998.
14	Making and Breaking: Early Level	Rhyme Phoneme Segmenting	Smart Kids Education Resources. 1998.
15	Learning Games: Consonant Blends and Digraphs	Consonant Blends Digraphs	McGraw-Hill Children's Publishing. 1997.

<b>Number</b>	<b>Game Title</b>	<b>Skill Reinforced</b>	<b>Publisher</b>
16	Tiki Challenge: A Blends and Digraphs Game	Phoneme Blending Digraphs	Lakeshore. 2008.
17	Roller Coaster Craze	Phoneme Blending	Lakeshore. 2008.
18	Swingin' Syllables Game	Counting Syllables	Lakeshore. 2009.
19	Cosmic Critters: A Phonics Game	Consonant Blends	Frank Schaffer. School Specialty Publishing. 1998.
20	Sound Switchin' Game	Rhyming Phoneme Segmentation	Lakeshore. 2009.
21	Two Way: A Fun Way to Discover Words	Spelling Vocabulary	Smart Kids Educational Resources. 1997.
22	Silly Circus	Adjective Development Vocabulary Building	Lakeshore. 2008.
23	Riddle of the Ruins: Using Context Clues	Context Clues	Lakeshore. 2008.
24	Adventure Camp: A Sequencing Game	Event Sequencing Reading Comprehension	Lakeshore. 2008.
25	Skate Park Rally: Predicting Outcomes	Predicting Outcomes	Lakeshore. 2008.

APPENDIX J

SUPERSPEED 1000 CHART OF PROGRESS

## **SuperSpeed 1000 Chart of Progress**

**Name:** \_\_\_\_\_

Using a highlighter, color in enough sections to indicate how many words you read in one minute. For example, if you read 30 words, color in the bottom three sections. If you read 45 words, color in the first four sections, etc.

200				
190				
180				
170				
160				
150				
140				
130				
120				
110				
100				
90				
80				
70				
60				
50				
40				
30				
20				
10				
wpm/week	Week 1	Week 2	Week 3	Week 4

Created by Kinsi Dawn Franzwa

APPENDIX K  
MY READING RECORD



## **My Reading Record**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

For the next four weeks please read a familiar book with your child each night (five nights a week, you choose which nights) for 20min. After you are done reading please initial this accountability sheet and then have your child initial it as well. In addition, please practice the SuperSpeed 1000 game with your child for 1min. each night (five nights a week, you choose which nights). Once you are done playing please initial this accountability sheet and have your child initial it as well (you will both initial in each box).

### **My child and I read for 20min: (Parent & child initial each day)**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

### **My child and I played SuperSpeed 1000 for 1min: (Parent & child initial each day)**

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday

Teacher initials: \_\_\_\_\_

APPENDIX L  
WRITE YOUR OWN SONG

### Write Your Own Song

This is an opportunity for you to become a songwriter! Please choose a classic children's song (such as "Row Row Row Your Boat," "Twinkle Twinkle Little Star," "Yankee Doodle," or even the "Alphabet Song") and make up your own words that match the melody of the song you choose. Your song should describe some of the things that you like about Topaz Preparatory Academy. Your song will be due in four weeks (on September 24<sup>th</sup>). On that day, please come prepared to perform your song for your classmates. You do NOT have to be a great singer to earn a good grade on this assignment. You will be graded based on how much effort you put into writing the song. The main goal here is to have fun playing with words and music.

Please go home tonight and talk to your parents about this homework project. If your parents have any questions please let them know that I would love to talk to them and help answer any questions that they have. Once you are done talking about this homework project with your parents please have them sign the bottom of this paper and then bring just the bottom portion of this paper back to school and turn it into me.

I would also like you to sign the bottom portion of this paper so that I know that you plan to work hard and write the best song that you can. Have fun!!!

(cut here)

---

Name: \_\_\_\_\_

I have read and discussed this homework project with my child and I know it is due on September 24<sup>th</sup>. \_\_\_\_\_

(Parent Signature)

I have read and discussed this homework project with my parents and I know it is due on September 24<sup>th</sup>. \_\_\_\_\_

(Child Signature)

APPENDIX M  
INFORMED CONSENT



CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO

SAN BERNARDINO

INSTITUTIONAL REVIEW BOARD COMMITTEE

APPROVED 07, 08, 10 VOIR AFTER 07, 07, 11

College of Social and Behavioral Sciences

Department of Psychology

Informed Consent

I understand that I am consenting to allow my child to participate in a six-week reading intervention program co-sponsored by Topaz Elementary School and California State University, San Bernardino. I understand that the goal is to assist my child in their reading growth and development. This project is being conducted by Kinsi Franzwa; a former teacher at Topaz Elementary School and a current graduate student in the Master of Arts in Child Development program at California State University, San Bernardino. The reading strategies and methods that will be used will be very similar to what my child is used to and will include:

- 1) Small group reading instruction where my child will receive multiple sessions that will last between twenty and thirty minutes of reading instruction designed to target the needs of my specific child.
- 2) Small group phonemic awareness instruction where my child will receive multiple thirty minute sessions of phonemic awareness instruction designed to meet the needs of my child at their specific level of phonemic awareness development.
- 3) Independent reading practice where my child will be given ten to twenty minutes of class time to practice reading the books that he/she will have already learned how to read with the researcher.
- 4) Independent activity centers where my child will be allowed to engage in various activities that will reinforce the skills that he/she is learning in their small group phonemic awareness instruction. He/she will also be given opportunities to engage in activities to experience language in a natural setting such as following written recipes and written directions.
- 5) A home component where my child and I will take time at home daily to engage in various activities such as reading together, playing reading games, and completing a small project that will be due at the end of the six weeks where I will help my child write a short song to a melody that we are already very familiar with.

I grant permission for my child's reading progress to be shared among the researcher, the researcher's aide, and my child's teacher. I understand that my child will either be chosen to participate in this project in its entirety (including the assessments and learning activities described above), or they will be chosen to participate in this project strictly during the pre and post assessment phases and will receive reading instruction from their regular reading teacher. Furthermore, I understand that the information will be kept in a securely locked place, so that both my and my child's confidentiality will be kept safe. Included in this packet is a brief background information survey. I agree to answer the questions to the best of my ability and return it to school with my child. If I have any questions or concerns, I can contact Laura Kamptner in the Department of Psychology at California State University, San Bernardino at (909)537-5582.

I acknowledge that I have been informed about and understand the purpose of this reading intervention research program and freely consent to my child's participation in it. I also understand that my child's participation is voluntary and that I can choose to have my child stop participating at any time if I decide I no longer want to be involved. This study has been approved by California State University, San Bernardino's Institutional Review Board.

\_\_\_\_\_ (printed name) \_\_\_\_\_ (date)

\_\_\_\_\_ (signed name)

909.537.5570 • 909.537.7003 • <http://www.psychology.csusb.edu/>

5500 UNIVERSITY PARKWAY, SAN BERNARDINO, CA 92407-2393

The California State University • Bakersfield • Channel Islands • Chico • Dominguez Hills • East Bay • Fresno • Fullerton • Humboldt • Long Beach • Los Angeles • Maritime Academy • Monterey Bay • Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • San Luis Obispo • San Marcos • Sonoma • Stanislaus

APPENDIX N  
PARENTAL INFORMATION LETTER

## **Parental Information Letter**

Your child is being asked to participate in a six-week long research study done as part of the requirements for a Master's thesis at California State University, San Bernardino. This study will be done at your child's school site (Topaz Preparatory Academy) during normal school hours.

### **Project Description:**

The purpose of this study is to increase the reading skills of second grade students. Your child will either be in a control group where they will receive reading instruction from their regular reading teacher, or the study group, where they will receive reading instruction from the research team. Both groups will receive reading instruction in phonics and effective reading strategies for one hour per day.

### **Child Involvement:**

Your child will be asked to participate in small group reading instruction and small group phonemic awareness instruction. They will also be asked to participate in various hands on activities which will be designed to reinforce the skills they have learned that week. Your child's participation is voluntary, and he/she can quit at any time. If your child does not want to participate in the study, he/she will continue in his/her normal reading instruction.

### **Identity Protection:**

On the first day of the study, your child will be assigned a code number that will be put on all of the material used in the study. Only your child, myself, and their homeroom teacher will know that code. This way, your child's information will be confidential, because no one who sees the data will know which child each number code belongs to. At the conclusion of this study, we will let all parents know the results.

### **Parental Involvement:**

You will be asked to read with your child, supervise an at home project, and play a 1min. word game with your child at home. Please read and sign the following page, which says that you understand what your child will be doing and that you will allow them to participate. Also, please complete the attached survey and send both the survey and permission form back to school with your child in this envelope.

Thank you!

Kinsi Franzwa,  
M.A. Candidate in Child Development  
California State University, San Bernardino

Dr. Laura Kamptner  
Professor Human Development  
California State University, San Bernardino

APPENDIX O  
CHILD ASSENT





College of Social and Behavioral Sciences  
Department of Psychology

Verbal Informed Consent/Assent for Child

You are being asked to be part of a program that is designed to increase your skills in reading. We know that all children learn differently so we have completed a lot of research and have identified the way that we think you will learn the best.

Some of you will be chosen to participate in the entire project (including the assessments and learning activities), and some of you will be chosen to participate in only a portion of this project (the assessment) and will receive reading instruction from your regular reading teacher.

We hope that by working with you and teaching you the reading skills that we have identified, you will become better readers.

During this six week reading program you will be involved in activities such as reading, playing phonics games, learning how to have fun while you read, and learning how to follow directions and recipes such as making play-doh.

If you decide at any time that you don't want to continue to participate you can be in charge and stop at any time. We can also talk at any time about any part of this if it seems confusing or frustrating for you. Your information will be kept safe and locked away when we are not together so that no one will know how you are performing in this class except me, my aide, and your teacher. We call this "confidentiality" and it means that your personal information will be kept private. Do you have any questions about what I just told you?

Now that I have explained the project, would you like to participate?

X

(Place an "X" on line above if you agree to participate)

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO  
INSTITUTIONAL REVIEW BOARD COMMITTEE

APPROVED 07/08/19 VOID AFTER 07/07/21  
IRB# 09/22 CHAIR *Sharon A. Ward, Ph.D.*

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Maritime Academy • Monterey Bay • Northridge • Pomona • Sacramento • San Bernardino • San Diego • San Francisco • San Jose • San Luis Obispo • San Marcos • Sanoma • Stanislaus

APPENDIX P  
LETTER OF SUPPORT



## HESPERIA UNIFIED SCHOOL DISTRICT

### Topaz Preparatory Academy

14110 Beech Street, Hesperia, CA 92345-3643



Principal – Karen Prestwood  
Assistant Principal – Dan Boatwright

Telephone (760) 244-4622  
Fax (760) 244-2511

May 15, 2010

K. Franzwa  
Department of Psychology  
California State University, San Bernardino  
5500 University Parkway  
San Bernardino, CA 92407

To the CSUSB Institutional Review Board,

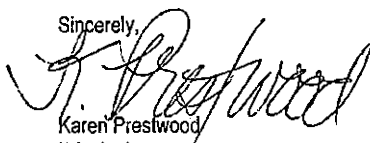
On behalf of Topaz Preparatory Academy in the Hesperia Unified School District, it is my pleasure to submit this letter of support for the reading intervention program proposed by Ms. Franzwa. It is my understanding that the six week reading intervention program will offer reading instruction to ten of our second grade students and will also involve pre and post assessments performed on an additional ten matched second grade students. I am particularly excited about this because at Topaz we continuously strive to provide our students with research-based teaching programs and strategies that have been proven to be effective in groups similar to ours.

Kinsi Franzwa was a teacher at our school site for two years and demonstrated exemplary teaching abilities, and I have no doubt that this project will be carried out with her upmost dedication, enthusiasm, and respect for our students. While teaching at Topaz Preparatory Academy she became familiar with the children and their parents, and she has shown both eagerness and competence in meeting their academic needs. I appreciate her basing her work in research-based teaching methods and look forward to the benefits that this will have on the students with which she will be working.

The proposal is to include not only phonics and whole language reading instruction but will also include a home component. This will be extremely useful since many of our students demonstrate reading growth when they consistently read with or to their parents, and when their parents are actively involved in their learning. Further, many of our parents struggle with not knowing exactly what to do at home with their children to help them learn. Ms. Franzwa's "My Reading Record" sheet will be shared with the student and the parents and will guide the parents in what types of activities they can get involved in at home to assist their child in their academic growth.

I highly recommend this proposal and hope you will give your approval for her to implement this project. It will go a long way toward the goal of helping children to become better and more enthusiastic readers. Please feel free to contact me should you need any more information.

Sincerely,



Karen Prestwood  
Principal  
Topaz Preparatory Academy

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