Reading Rescue®'s Research Base:
A Review of Scientific Studies Supporting Assessments and
Lesson Components
and
Research Documenting the Model's Effectiveness in Inner City, High Poverty Schools.

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Reading Rescue®, a staff development and intensive intervention model, has been under continuous adoption in schools since 1993. The developer, Nora Lee Hoover, Ed.D., created the program at the request of elementary school principals who were convinced that research-based, one-on-one tutoring would enable struggling beginning readers to succeed. Hoover, then a professor of Language and Literacy in the University of Florida’s College of Education, accepted the challenge of designing a training sequence powerful enough to enable school staff that may have no background in the teaching of reading (such as teaching assistants and paraprofessionals) to accelerate literacy among a school’s most difficult-to-teach students. Based on her knowledge of effective reading instruction and school reform, and her 20-plus years of supervising tutoring in university clinics and in public schools, and in collaboration with administrators, teachers and tutors, Hoover developed a comprehensive training and intervention model reflecting sound experimental research.

Reading Rescue® includes screening assessments to identify students the program will serve, rigorous and sustained training for tutors in the assessment of early literacy and in effective, research-based instruction, training for the program’s coordinator within a school, and technical assistance for school administrators to support the program’s successful implementation.

As new research has been reported over the years, Hoover has continued to enhance both the training that tutors receive, and the instructional approaches tutors are trained to use with their students. The techniques and procedures used by Reading Rescue®-trained tutors are supported by a wide variety of recent experimental evidence including: an experimental study of Reading Rescue® by leading researchers, the National Reading Panel’s meta-analysis in 2000, numerous studies published in peer reviewed journals examining effective instruction for low
performing beginning readers, and by a plethora of legislation that calls for intervention to assist struggling readers early in their school experiences with evidence-based practice. The purpose of this review is to discuss the assessment and instructional components of Reading Rescue® and lend support to each component with current research findings and current reading theory.

Learning to read is perhaps the most important skill any young child can accomplish. Becoming a proficient reader will facilitate learning throughout a child’s school career and life. Failing to provide a child with literacy experiences that enable him or her to achieve early fluent reading may severely limit the literacy level he or she will ultimately obtain. In today’s classrooms children must progress from “learning to read” to “reading to learn” (Chall, 1996) by the third grade. However, this transition can take place only if all of the antecedent components of reading have been fully accomplished (Shankweiler & Fowler, 2004). While many children learn to read an alphabetic script quickly without formal instruction, the process of learning to read proves complicated and confusing for many young children (Adams, 1990). Students who cannot read well in the early grades tend to be at higher risk of performing poorly in later grades and other subjects, having emotional and behavioral problems, and dropping out of school (Lesnick, George, Smithgall, & Gwynne, 2010). It is important to address early reading difficulties promptly and thoughtfully with effective, research-based interventions (National Reading Panel, 2000).

In 1997, the U.S. Congress requested that the Director of the National Institute of Child Health and Human Development, in consultation with the Secretary of Education, appoint a panel of experts to determine the effectiveness of various approaches to teaching reading. The National Reading Panel (NRP) examined over 100,000 experimental studies to determine the most essential components of learning to read. The NRP (2000) identified five elements that
should be at the heart of any early reading approach: phonemic awareness, phonics, vocabulary, fluency, and reading comprehension.

Children may have difficulty learning to read for a variety of reasons. Many students do not realize that spoken words are made up of individual sounds that can be broken apart (phonemic awareness). Other children have not made connections between letters and the sounds they represent (phonics). Another student may recognize every letter and sound but be uncertain how to blend components into words (word reading). While others may be proficient in decoding words but do not comprehend the words or the sentences in which they appear. Some may lack the fluency or vocabulary needed to comprehend texts (Cheung & Slavin, 2013). Some students may have difficulty with several or all of these tasks. Reading Rescue® skillfully combines all of these components into each and every tutoring session.

**Reading Rescue’s® Classwide Screening Assessments of Emergent Literacy**

Incorporating Reading Rescue® into a school’s existing instructional program begins with the selection of school staff members who will be trained as tutors. Prospective tutors receive extensive training through staff development sessions, supported by a well written *Handbook for Tutors* (N. Hoover, 2011) and a wealth of resources on the program’s web site: ReadingRescue.org. In order to identify low performing students who will be served by Reading Rescue®, all first graders are briefly evaluated using pencil and paper assessments, administered to entire classes. Specifically, students are asked to write the lowercase letters from memory, write the uppercase letters from memory, complete an invented spelling test, and write all the words they have learned how to spell correctly (adapted from Clay, 1993). The two alphabet writing scores are then averaged, as are the scores from the word writing and invented spelling task. In addition to identifying students at-risk of literacy failure, the assessments also serve to
gather baseline data for all students at the beginning of the year and to track student progress, as well as establishing local or school norms for student performance. Students in the lower quartile (25%) are targeted for program participation. The coordinator at each school, in consultation with Reading Rescue® staff, ultimately decides which students will be tutored (N. Hoover, 2011).

**Reading Rescue’s® Individual Assessments**

Reading Rescue® tutoring begins with five initial sessions during which tutors provide activities that students can succeed in doing, interspersed with a battery of nine individual assessments, including the invented spelling and word writing assessments that were used as screening measures. (These are given a second time in the event that the student was distracted or confused during the class wide administration.) During the initial sessions, a student’s letter/sound knowledge (names of letters, sounds letters represent, and words that begin with each letter); print concepts; ability to blend sounds in words; segment sounds in words; and phonics are also assessed. In addition, students are assessed on sight word knowledge, oral reading, and comprehension following oral reading utilizing the *Ekwall/Shanker Reading Inventory* developed by Ekwall and Shanker (Shanker & Ekwall, 2003; Shanker & Cockrum, 2013), or a similar instrument.

Along with other insights, results from the assessments give tutors an understanding of a beginning reader’s letter name knowledge, phonemic awareness and invented spelling ability. Multiple experimental and correlational studies have shown that letter knowledge and phonemic segmentation ability are the strongest predictors of later reading achievement (Share, Jorm, MacLean & Matthews, 1984; Juel, Griffith & Gough, 1986; National Early Literacy Panel, 2008). Children given early training in phonemic awareness and alphabetic coding show superior
outcomes on measures of word recognition and later comprehension abilities (Roberts & Meiring, 2006).

Children who know the names of letters may or may not also understand that text or writing represents spoken language. Letter name knowledge assists in letter-sound learning and likely has a bearing on how children use letters and sounds to improve their memory of newly presented words and concepts (Share, 2004). Similarly, many students do better when asked to supply all three pieces of information at once - the letter names, sound and sample word - possibly because all three are linked in memory (Oudeans, 2003, Rosenthal & Ehri, 2008, Ricketts, Bishop and Nation, 2009) and this is exactly the procedure Reading Rescue® tutors are trained to use when assessing the extent of this knowledge among their students.

Invented spelling tasks assess how children experiment with putting words into print. Listening for and separating sounds in speech (phonemes) and being able to transfer those sounds to letters (graphemes) that represent the sounds is a more advanced task than writing known words or segmenting sounds with magnetic letters. Typically, invented spellings increase in sophistication and gradually come to resemble conventional spellings (Levin, Both-DeVries, Aram & Bus, 2006; Treiman, 2006; Ouelette & Senechal, 2008). As an assessment, more information can be gleaned from asking a student to produce letters and spellings, rather than simply recognizing them. Production almost always requires a higher level of mastery than recognition, and teachers, as well as tutors, can gain more insight into a child’s true understanding by examining written letters and invented spellings (Bloom, 1984; Ouelette & Senechal, 2008).

Children’s knowledge of print concepts is also assessed. This assessment probes a student’s understanding of the format of books and how the spoken language is represented in
print, examining the student’s awareness of letter and word boundaries and the purpose of various punctuation marks. Students who have had great exposure to print throughout their preschool years will likely have a greater understanding of the form and function of print. They will typically understand there is a difference between print and pictures, and will understand that the letters on the page have some connection to the sounds of speech, even if they are not yet able to read words. These basic understandings of print concepts will provide a basis for the reading instruction that will follow (Clay, 1993; N. Hoover, 2011; McGee & Richgels, 2012).

However, students that have not had much exposure to books, print and shared readings in their preschool years will often have difficulty understanding that written symbols represent the sounds in speech, and will have little, if any, understanding of the ways in which print (written letters) connect to sounds in spoken words.

The lowest level passage used for testing purposes, the preprimer, as was previously mentioned, is administered, usually taken from the Ekwall-Shanker Reading Inventory. If, in the fall of the year, a first grader, contrary to the results of the screening assessments, is able to read the passage at an independent level, where oral reading accuracy is 98% or higher, or at the instructional level (95% oral reading accuracy), he or she is not considered a candidate for Reading Rescue® tutoring. However, there has been no report to date of a student, identified by the Reading Rescue® Classwide Screening Assessments as in need of tutoring, who has been able to read the preprimer passage successfully in the fall. Reading Rescue® students are asked by their tutor to attempt the preprimer passage, but are not permitted to continue with it, when the tutor sees that that passage represents the student’s frustrational reading level. The passage is used as a pre-assessment to establish a base line for the student against which his or her subsequent progress can be measured. When tutoring begins mid-semester for a second cohort of
students, the preprimer passage may represent the instructional level for some entering Reading Rescue® students, but may be frustrational for many. In order to graduate from Reading Rescue® at mid-year, the first grade passage must reflect the student’s instructional level and, in the spring, the second grade passage must reflect a graduating student’s instructional level.

**Activities During Easing In Sessions**

The five-session Easing In period is essential for tutors and students to begin to feel comfortable with each other and to enable the student to feel successful. In addition to administering the individual assessments previously identified, during Easing In sessions, tutors allow the student opportunity to go back over, and to demonstrate, the knowledge of letters and words he or she has acquired. No new learning is attempted during this period, with the goals being to establish trust and create a feeling of security for the child. For example, tutors invite their students to use magnetic letters to create words that the tutor knows the student can spell correctly; tutors don’t attempt to teach the spelling of additional words during Easing In sessions.

Tutors do, however, provide the easiest of books for their student to “read” during Easing In sessions. They assure students’ success with the books by providing elaborate book introductions for Intervention Level one or two books (Guided Reading Level A), enabling their students to “read” such books easily, even if the “reading” only amounts to the identification of words using the illustrations on the page following the “walk through” provided by the tutor who deliberately mentions the words in discussing the book. The “reading” of very low level books during Easing In sessions is designed to provide the student with successful experiences with books, and to enable the student to practice basic skills such as left to right progression and a crisp print-to-speech match.
During Easing In sessions, tutors and students each draw “Two Minute Pictures,” simultaneously, followed by both the tutor and the student writing “something” underneath their pictures that they then “read” to one another. The tutor deliberately refrains from asking the student to write a sentence under his or her picture because many Reading Rescue® students don’t know yet what a sentence is. The tutor accepts whatever attempts at writing the student produces. These unassisted writing samples provide a base line of the student’s writing ability at the start of tutoring.

Another important component during the Easing In sessions is the introduction of sound, or Elkonin, boxes (Elkonin, 1973). The Russian psychologist, Elkonin developed this highly effective method of teaching children how to phonemically segment the sounds of language. During Easing In sessions, students are taught how to slide coins into horizontally drawn boxes under pictures to show the separate sounds in words, for example, the word “ice.” Children first look at a picture representing a word (e.g. an ice cube), and then the tutor demonstrates how to slide a marker into each of the sound boxes under the word (in this case, two boxes.) Practice is provided in moving markers into boxes for words that have two, three, and four sounds during Easing In. Many of the students who are tutored are not aware that words are made up of sounds, much less how to pull them apart, or segment, one sound from the other. Elkonin sound boxes provide a visual, kinesthetic and tactile mode for developing awareness of sounds and skills in segmenting them. The purpose of Elkonin Boxes during Easing In, and continuing into the early weeks of tutoring, is not to correctly spell words in a conventional way, but rather to encourage a student’s listening and auditory discrimination skills for later phonics and spelling work (Ehri & Roberts, 2006; N. Hoover, 2011). Once tutoring gets underway, a Letters and Words I Know Book that’s given to each student allows for a great deal of additional practice using Elkonin
Boxes for students who need the additional practice. Before a student graduates from the program, the tutor may help the student fill the Elkonin Boxes with the appropriate letters if the student is interested in doing so, and if, in the judgment of the tutor, the student would benefit from matching the individual sounds in each word with the corresponding letters needed to spell each word correctly.

The *Letters and Words I Know Book* (N. Hoover, 2011) that each student receives during Easing In initially contains a page for each letter the student identifies correctly on the *Assessment of Letter and Sound Knowledge*, administered by tutors during the very first Easing In session (following this assessment, the tutor removes pages for any letters the student didn’t recognize or could not provide a sound for.) There are actually two pages for each letter of the alphabet, printed back to back: on one side are Elkonin Boxes where the letter is in the initial, medial, and final positions in words and, on the other side are two columns, one that the student uses to record words s/he has learned to spell that begin with the letter, and the other that the tutor uses to write down new vocabulary words s/he’s taught the student, along with their meanings. As each new letter and its sound is taught and learned, the corresponding page is added. Tutors are encouraged to make use of the *Letters and Words I Know Book* to provide students with many opportunities to repeatedly review what they do know during the Easing In process. Such over-learning provides a firm foundation for later learning, builds a rapport between the student and the tutor, and also helps struggling readers to develop self-efficacy and self regulatory strategies where they may have previously been lacking (Paige, 2011).

**Reading Rescue® Tutoring Lessons and Phases**

Once the Easing In sessions are completed, tutors begin the instructional program, which is divided into four Phases corresponding to intervention book levels. Tutors are taught the
milestones that students need to achieve in each Phase and how their own behavior as effective tutors needs to change across the Phases in order to facilitate their students’ rapid progress. Phase One spans Intervention Levels 1-4; Phase 2, Levels 5-9; Phase 3, Levels 10-17. Each 30-minute Reading Rescue® lesson in the initial three Phases features the same components that are modified over time to account for the expanding ability of the student being tutored. A simplified Phase 1 to 3 lesson includes five parts: 1) Fluency building including Timed Readings (Samuels, 1979; Therrien, 2004) and a focus on comprehension; 2) Assessment using written records (as opposed to running records) 3) Direct instruction using multisensory techniques to develop phonological awareness, phonics and phonograms; reinforcement of new vocabulary (word meanings) 4) Development of phonological awareness, phonics, spelling and comprehension through writing; and 5) Text-based vocabulary, phonics and comprehension instruction using a new text (N. Hoover, 2011). These five parts clearly correspond with the five areas for effective reading instruction as identified by the National Reading Panel. Reading Rescue® identifies these components as the “Fab Five” of reading instruction: phonemic awareness, phonics, fluency, vocabulary and comprehension (National Reading Panel, 2000; Ehri, Nunes, Stahl, & Willows, 2001; Ehri, Nunes, Willows, Schuster, Yaghoub-Zabeh, & Shanahan, 2001).

Component #1

Fluency Building in Reading Rescue® Lessons

The ability to read fluently for meaning depends primarily on rapid, automatic decoding and recognition at the level of the single word. Skilled readers process virtually all the words they encounter in connected text accurately and rarely mix up words that look similar, indicating the use of word level processes, rather than a memorization of visual patterns in words (Perfetti, 1992; Gough & Tunmer, 1986; Vellutino, 1991; Tunmer & W. Hoover, 1993). The more skilled
students become at decoding and word reading, the less conscious effort is required for it, and the more conscious capacity is left over for comprehension of the word and surrounding sentences (Pressley, 2000). Beginning readers, particularly those who struggle, need the opportunity to develop automaticity in word recognition and this is accomplished in Reading Rescue® lessons through the use of repeated readings beginning in Phase 1 (Kuhn & Stahl, 2003) and Timed Readings (Samuels, 1979) once students are reading at level 10. The number of minutes allocated to this lesson component increases over the Phases of tutoring as students are acquiring word recognition skills and thus require an increasing amount of time to consolidate them.

Books used for fluency building are ones that the tutor introduced and that the student read at least once in a previous lesson. Since the books have not yet been mastered, the student may still be challenged by a few words. Reading Rescue® tutors are trained to coach the student using specific oral reading prompts that reflect the current scientific understanding of the development of accurate decoding (Heubusch & Lloyd, 1998). Although the goal in the first lesson component is clearly fluency building, tutors are trained to maintain a focus on comprehension as well, by encouraging comments and brief discussion about the texts, asking questions, making connections across texts and, in Phases 3 and 4, demonstrating comprehension strategies such as summarizing.

The purpose of beginning literacy instruction in school is to help children master the challenge of connecting their spoken language to the initially arbitrary symbols on a page. These are commonly known as letter-sound correspondences, but are more accurately named grapheme-phoneme correspondences or grapho-phonemics. Connecting the ephemeral sounds in spoken language to the letters written in a text is known as phonics. Disagreement has centered
on whether students should be taught these concepts explicitly in a systematic way or whether they should be taught incidentally in a whole-language context as the need arises (Ehri, Nunes, Stahl & Willows, 2001). Experimental, causal studies of reading instruction clearly support systematic, synthetic phonics instruction where children are taught sound-symbol correspondences, blending, and decoding directly and explicitly. Teaching should be grounded in an instructional program that includes phoneme awareness, plentiful reading to build fluency, vocabulary development and guided oral reading to build comprehension (Moats, 2000).

Reading Rescue® is such a program.

Component #2

Assessment in Reading Rescue® Lessons

A student’s reading ability is advanced in the last lesson component as the tutor helps the student read a text for the first time. As the student encounters unknown words, the tutor uses recommended prompts to help the student identify them. The following day, the tutor assesses how well the student is able to read the same text by taking a written record, a procedure whereby a tutor records a check for each word the student reads correctly, and uses a system of symbols to record any divergences from the text, such as mispronunciations or words left out. Tutors take a written record every day in Phase 1, three times a week in Phase 2 and twice a week in Phase 3. The taking of written records is reduced over the Phases to allow more time for teaching, but a tutor is free to take a written record whenever he or she feels one is needed. Tutors record any errors their students make as they read aloud, and then ask a comprehension question (one that they didn’t ask the previous day when the text was read by the student for the first time) such as, “What lesson does this story teach?” or, “What is the most important thing we learned about recycling?” to evaluate understanding (Goodman, 1973; Clay 1993). A tutor’s skill
in keeping his or her student reading at, or above, his or her instructional level, while continually advancing through higher levels, is critical to the acceleration of a student’s achievement. It has long been thought that students learn best when they’re provided strong instructional support to extend themselves by reading texts that are on the edge of their learning - not too easy but not too hard (Vygotsky, 1978; Fountas & Pinnell, 2013). This may be the case for many readers; however, an experimental study of Reading Rescue® conducted by Ehri, Dreyer, Flugman, & Gross (2007) reported the largest gains among students who did the most reading in tutoring sessions at their independent levels (98% to 100% accuracy).

The practice of recording students’ errors or miscues, and especially the traditional method for analyzing oral reading errors, has met with some resistance in current research circles (Hempenstall, 1999; Moats, 2000, Shanahan, 2014) and its validity and reliability as a standardized comparative assessment has come into question. Kenneth Goodman and his colleagues developed the Reading Miscue Inventory (RMI) in the 1960's. It was later adapted by Reading Recovery® (Clay, 1993) and has become commonly known and utilized as “running records.” Initially, Goodman was interested in the processes occurring during reading, and believed that miscues (any departure from the text by the reader) could provide a picture of the thinking processes occurring during reading. He used the term miscue, rather than error, indicating that a departure from the text is not necessarily a mistake or error to be corrected (Goodman, 1973). Readers' miscues include substitutions of the written word with another, additions, omissions, and alterations to the word sequence (Hempenstall, 1999). By utilizing this procedure it is thought that teachers can better monitor a child's progress along the path to reading success, as well as identify strengths and needs of students. Depending on the type of
miscue, teachers can decide on what kinds of mini-lessons or interventions may be used to address the needs of their students.

Goodman and his colleagues developed RMI within the whole language philosophy of teaching reading. The whole language approach emphasizes the importance of helping even beginning readers integrate the three cueing mechanisms: semantic, syntactic, and graphophonic, in identifying unknown words. Of the three, the graphophonic (letter-sound) system is considered a lesser contributor to accurate, automatic decoding. Students who are learning to read are encouraged to predict words based primarily upon semantic (meaning) and syntactic (grammar or syntax) cues, followed by confirmation that the chosen word is consistent with the context by possibly considering the first and last letters/sounds of the word. The systematic teaching of phonemic awareness and phonic correspondences is not encouraged, nor deemed necessary, within a whole-language based approach.

In this meaning-based framework, a substitution of “pony” for the word “horse” would still convey the meaning of the sentence and would not indicate the need for feedback or correction. A substitution of “house” for the word “horse” however, would be considered a more acute miscue of meaning in need of remediation because the overall meaning of the sentence does not remain intact. Conversely, in a systematic phonics based approach, such as Reading Rescue®, students are encouraged to look more closely at the letters in attempting to pronounce a word, (the opposite of that recommended in the RMI), but well supported by more current research and theory (Adams, 1990; Hempenstall, 1999; Moats, 2000, NRP, 2000), and then to use context (pictures, meaning and, when possible, syntax) to confirm pronunciations. Recent research shows that readers' miscues shift over time, from early errors based on context and meaning to errors based upon graphemic similarity (words that look similar and use similar
letters.) Within this understanding of reading, a substitution of “house” for “horse” would be an indicator of greater reading ability than substituting “pony” for “horse”. In a word level/ phonetic reading program, both errors would denote a need for corrective feedback from the tutor or classroom teacher (Adams, 1990; Goswami & Bryant, 1990; Ehri, 1992; Perfetti, 1992; Stanovich, 1986, 1990; Vellutino, 1991).

However, in utilizing the general procedure of miscue analysis to look for errors of decoding, substitution, and self-correction, tutors are able to individually and informally assess students with some accuracy, especially when comparing early records with later records for the same student progressing within the program. Moats (2000) explained that error (miscue) analysis has value when based on an understanding of reading and spelling processes and can be helpful to determine what kind of problem a child has, what kind of information that child needs, and what kind of instructional activities are likely to work well. Reading Rescue® utilizes error analysis for just these purposes: that is, to assist tutors in understanding beginning points and progress of students while reading, as well as to identify patterns of errors as a basis for providing research-based intervention in the areas of phonemic awareness, decoding and meaning of words (Hempenstall, 1999; Moats, 2000). The phrase “written records” is used within the Reading Rescue® program precisely to differentiate their analysis from the traditional analysis of running records, which, as has been suggested, is not supported by the current, research-based understanding of how beginning readers acquire the ability to decode text.

The practice of assessing students’ instructional, independent and frustration reading levels has also come into question in recent discussions. Shanahan (2014) explains that there is a growing body of research showing no consistent relationship between student-text matching and learning. Shanahan suggests that the goal of establishing reading levels is not to find books easy
enough to ensure good reading, but to provide enough scaffolding to allow students to read
harder books successfully. Reading Rescue® establishes levels for beginning readers and then
provides intense scaffolding within all of the recommended areas to help students read at higher
levels than initially assessed and to proceed to grade level reading.

**Component #3**

**Direct Instruction Using Multisensory Techniques to Develop Phonological Awareness,**

**Phonics and Phonograms; Reinforcement of New Vocabulary (Word Meanings)**

The terms phonological and phonemic awareness are often used interchangeably or
substituted for each other, but they are quite different. Phonological awareness is the larger, more
over-arching term that refers to an awareness that spoken language is made up of sounds like
syllables and words that rhyme (Ehri & Roberts, 2006). Reading aloud to children has long been
viewed as an important aspect of encouraging literacy development and phonological awareness
in the early years (Adams, 1990). However, it remains uncertain if reading story books aloud to
children or practicing skills through syllable differentiation and rhyming activities will lead to
the development of subsequent reading ability (Byrne & Fielding-Barnsley, 1991; Goswami,
1990; Bryant, MacLean, Bradley and Crossland, 1990; Johnston, Anderson & Holligan, 1996;
Nation & Hulme, 1998; Yeh & Connell, 2008).

Phonemic Awareness is a more specific component of phonological awareness. Phonemes are the smallest units of sound in speech that change meaning and phonemic awareness refers to the ability to manipulate phonemes in spoken words. For example, understanding that the word “stop” has four phonemes (/s/-/t/-/ä/-/p/) and being able to isolate those phonemes within words, as well as determining that “stop” without the initial phoneme /s/
now becomes “top.” Although phonemic awareness applies to spoken language, its function is to enable beginners to connect speech to print (Ehri & Roberts, 2006).

Making connections between phonemes in spoken words and graphemes in the spellings of words by segmenting words into phonemes is an important component of learning to read. The use of Elkonin boxes is one way to encourage students to segment the phonemes they hear. As described previously, tutors use tokens or coins to help students distinguish and count phonemes in simple words. In addition, Reading Rescue® tutors use magnetic letters to help students make more complete connections between graphemes and phonemes. Tutors and students begin with two-phoneme words and two sound boxes. As students show mastery of two phonemes they then progress to three and four phoneme words with the corresponding numbers of sound boxes. Studies show that children who are taught to segment sounds in pronunciations of words and associate sounds with letters make faster progress in learning to read in the first two years of instruction than those children who lack these capabilities (Share et al., 1984, Yeh & Connell, 2008; Boyer & Ehri, 2011). Children who lack phoneme segmentation and blending skills upon entering first grade are more likely to be poor readers in the fourth grade (Juel, 1988).

Phonics instruction incorporates phonemic awareness ability and includes the process of linking sounds to letters and combining them to make words. The National Reading Panel (2000) states that explicit, systematic phonics instruction helps children to read better than unsystematic or no phonics instruction. Roberts and Meiring (2006) also compared explicit systematic phonics instruction to incidental phonics embedded in a literature-based approach. In a longitudinal study beginning in first grade and ending in fifth grade, children receiving explicit phonics instruction did significantly better when phonetically spelling real and pseudo-words, reading real and pseudo-words, and writing longer stories. Even more surprisingly to some, at the end of fifth
grade, the children who had received explicit, systematic phonics instruction had significantly higher comprehension scores than did students taught within a literature-based approach. The two groups received no different comprehension instruction throughout the subsequent years after the systematic phonics instruction, however, the group that began with the explicit phonics instruction maintained exceptional results, even in comprehension where they had not been specifically tutored.

Jeanne Chall (1996) explains the theory behind these results in Stage 2 of her reading theory – Confirmation, Fluency, Ungluing from Print. This stage typically happens around ages 7 or 8. Stage two consolidates the learning from Stage one. Chall recommends reading and re-reading stories in order to increase fluency and confirm what is already known. The reader uses the basic decoding skills acquired through phonemic awareness and phonics skills, and with repetition can begin to apply their previous knowledge to better understand text. Repetition and prior knowledge, when used in conjunction with good decoding skills, allows previously decoded words to become sight words, and enables the reader to improve fluency and speed. Chall explained that the more a reader in this stage can practice, the better chance he or she has of becoming a fluent reader. Reading Rescue® provides many opportunities for students not only to practice their decoding skills, but to read and reread texts at an instructional level to achieve greater fluency and increased comprehension, as Chall suggests.

Once students have developed knowledge of letter names, the sounds associated with those letter names, phonemic awareness and a working knowledge of phonics, there is still much to do before fluent reading may take place. Teachers and students commonly refer to a process of “sounding out” unfamiliar words. It is frequently expected that once students know the sounds that are associated with letters, being able to sound out a word should be an easy transition. This
is often not the case (Moats, 2000). When teachers refer to the term “sounding out” they are really referring to a process known to reading researchers and specialists as decoding.

Decoding refers to word recognition processes that transform print into words (Gough & Tunmer, 1986; W. Hoover & Gough, 1990; Kamhi & Catts, 2012). Certainly, connecting sounds in speech to letters on a page (sounding out) is part of the process, but decoding goes beyond the idea of sounding out letters. Decoding includes the ability to recognize patterns, understand that different letters may represent different sounds depending on where they appear, and knowledge of common syllables, prefixes and suffixes. It calls for a full understanding of a variety of phonemes that may be represented in different ways and by graphemes that contain multiple letters, especially within the highly variable English language orthography.

Reading Rescue® provides a systematic introduction to unknown letters, combinations of letters (graphemes) and phonograms (word parts) utilizing multi-sensory methods and attention to pronunciation. Students are systematically taught to utilize visual, auditory, kinesthetic and tactile methods when learning each grapheme-phoneme correspondence and while blending the phonetic elements together to form words. As the student progresses through the Phases, previously learned phonetic elements are reviewed each day. In doing so, students are able to explore the sounds, letters and words fully, in ways that are meaningful and helpful to a variety of learners. Tutors then specifically help students connect phonetic elements and words to sentences or books the student is reading, further assisting students in gaining fluency and comprehension ability through the process of word reading.

Current research supports that the most important skill in the beginning stages of reading is the ability to read single words completely, accurately, and fluently. Most of the variability in reading achievement at the end of first grade is accounted for by children's ability to decode
words out of context, using knowledge of phonic correspondences, not their language ability or linguistic comprehension; while the most common and fundamental characteristic of poor text reading is the inability to read single words accurately and fluently. Efforts should be directed at explicitly and systematically teaching the connection between phonological rules and the written word. A phonics emphasis provides advantages for readers over a whole language approach (Lyon 1985; Hempenstall, 1999; NRP, 2000, Moats, 2000).

Various reading researchers have developed stages or phases of word recognition (Gough & Hillinger, 1980; Mason, 1980; Chall, 1983; Frith, 1985; Ehri, 1998; Stuart & Coltheart, 1988). Uta Frith described three phases that are discussed in Reading Rescue®: the logographic stage, the alphabetic stage (early and advanced) and the orthographic stage. Each phase (or stage) in her theory is characterized by the different strategies that a young reader might utilize to help them read words (Ehri, 2005).

The first logographic phase exists when readers recognize words on the basis of visual or contextual features. Children in this phase do not associate sounds with symbols; they don’t make connections between graphemes and phonemes, rather they recognize words as if they were logos, like the McDonald’s arches, a stop sign, or even the visual cues in the word bed (“bedposts” represented by b and d) or look (the two o’s in the center may symbolize eyes). Typically, this phase of reading may happen in preschool or early kindergarten. It is likely that students in first grade who are still in the logographic stage would not be recommended for participation in the Reading Rescue® program in the fall because they don’t know enough yet to accelerate with tutoring; they would more likely be candidates for tutoring in the second semester. First grade students who are reading logographically need to learn letter names, letter
sounds and practice making the correspondences between the letters and sounds first, before they are prepared for rapid advancement through intensive, skilled tutoring. (N. Hoover, 2011).

In the second alphabetic phase readers begin to use spelling-sound rules to read words (Ehri, 2005). Reading Rescue® divides this phase up into early alphabetic and advanced alphabetic stages. In the early alphabetic stage the child begins to associate letters on a page with sounds they hear in language. Students in this phase will show the beginnings of phonemic awareness. They can blend single sounds into words and can identify an initial sound and connect it to a letter. Once children understand that spoken words are made up of sounds and those sounds are represented by letters (grapheme-phoneme correspondences) they will enter the advanced alphabetic stage (N. Hoover, 2011). Children in this phase will typically have more complete sound/symbol associations, they can decode simple one-syllable words, they begin to recognize chunks and many of the words or chunks will become firmly grounded in their sight word vocabulary (Ehri, 2005, 2014; N. Hoover, 2011).

Efficient sight word reading allows readers to focus more attention on constructing the meaning of the text (Ehri, 2005, 2014). Ehri and other well-known researchers believe that sight word reading is not a strategy for reading words, but is a consequence of learning to read words through decoding, analogy and prediction. Eventually all words become sight words because they have been previously learned and are linked with meaning in memory. Asking children to recognize unknown words by “sight” because of their visual shape or appearance is discouraged by most well researched theories of reading (Gough & Tunmer, 1986; Moats, 2000; Ehri, 2005, 2014).

In the third orthographic phase, decoding becomes more efficient as students begin to consolidate their understanding of grapheme-phoneme knowledge into larger chunks. Children
begin to recognize the patterns that form onsets, rimes, syllables and whole words more efficiently. They spend less effort on decoding each letter or grapheme and more time on fluent word recognition, syntax and comprehension abilities (Bhattacharya & Ehri, 2004; Ehri, 2014, Chall, 1996; Roberts & Meiring, 2006). In the *Handbook for Tutors* Hoover summarizes the components of the reading process: Phonemic awareness plus letter recognition plus concepts of print plus the written alphabetic code plus rapid accurate decoding… then comprehension is possible provided the reader understands the meanings of words and can employ various reasoning and metacognitive strategies (N. Hoover, 2011; Scarborough, 2001).

Word Sorts and the use of Elkonin boxes are two types of phonic techniques that have been embedded within many comprehensive reading programs (Clay, 1993; Cunningham, Perry, Stanovich & Stanovich, 2004). Tutors introduce concrete manipulative materials in this lesson component in order to facilitate phonemic awareness and spelling abilities in young novice readers (Stahl, Duffy-Hester & Stahl, 1998). Utilizing word boxes and word sorts also incorporate the well-researched behavioral principles of teaching and learning such as modeling, opportunities to respond, repeated exposures, corrective feedback, and reinforcement (Skinner, Logan, Robinson & Robinson, 1997, NRP, 2000).

Reading Rescue® tutors use word sorts that encourage the beginning reader’s knowledge of the phonetic elements of onsets and rimes known as phonograms (Joseph, 2002). Traditionally, words are printed on index cards, and can be sorted according to common spelling and sound patterns (Zutell, 1998). In Reading Rescue® lessons, tutors draw on the words that appear in the sentences the student has written in previous lessons. Word sorts have been shown to help children closely examine grapheme-phoneme correspondences and identify those words with
similar and different spelling and sound patterns (Joseph, 2000; 2002; Morris, Shaw & Perney, 1990; Santa & Hoien, 1999).

Two types of vocabulary are celebrated and reinforced as well in the third lesson component: the student’s sight word vocabulary, as well as his meaning vocabulary. As was reported previously, in the student’s Letters and Words I Know Book, there is a double-sided page for each letter of the alphabet. The tutor directs the student to locate the appropriate page for a word that the tutor knows the student has learned to decode and to spell. Such words are written in the left hand column, thus documenting the student’s success. The tutor enters words she has defined for the student in the right hand column on the appropriate page; these are reviewed periodically (Ehri, 1998).

Component #4

Reinforcement of Phonological Awareness, Phonics, Spelling and Comprehension Through Writing

Current experimental research not only shows a link between phonemic awareness and reading, but also lends support to a link between spelling, vocabulary and writing (Ehri & Wilce, 1987; Ehri 1989; Berninger, Vaughn, Abbott, Brooks, Abbott, Rogan et al., 1998; Graham, Harris & Fink-Chorzempa, 2002; Rosenthal & Ehri, 2008; Ricketts, Bishop and Nation, 2009). Ehri explains that spelling contributes to vocabulary knowledge and reading development by shaping children’s knowledge of phonemic awareness, improving their understanding of the alphabetic principle, and making sight words easier to remember. Knowledge of orthography then helps children to form more complete connections between the spellings of words, their pronunciations and the meanings of words in memory.
While many believe that the direct teaching of spellings is ineffective or unnecessary, Graham, Harris & Fink-Chorzempa (2002) confirmed a link connecting learning to spell with reading and writing development. Struggling students who received supplementary spelling instruction significantly outperformed their counterparts in a control condition on measures assessing spelling performance and showed greater progress in their ability to construct written sentences. Effects of spelling instruction transferred to writing and improved children’s text-production skills as measured directly after the completion of tutoring, as well as six months later. The study also indicated a link between learning to spell and reading development. Children’s word-attack (word reading) skills improved as a result of spelling instruction that included activities to strengthen their understanding of the alphabetic principal, phonological awareness skills and word sorting activities (Graham et al., 2002). Spelling and early writing attempts also allowed students to better understand the connections between reading and writing and subsequently begin to develop the self-regulatory strategies of goal setting, self-monitoring and self-instruction (Juel, 1988; Harris, Graham & Mason, 2006). Collectively, the results of these studies suggest that the writing component of Reading Rescue® lessons makes a significant contribution to a student’s literacy acquisition.

In each Reading Rescue® lesson in Phases 1 and 2, the tutor helps the student write a sentence with each word spelled correctly (adapted from Clay, 1993). Most often, the sentence is one that the student said in response to a tutor’s comprehension question about a book, usually the book used for the written record. Occasionally, if a student is excited about an event in his or her life, such as the birth of a sibling, the tutor will “grab” a sentence the student articulates in reporting the event. If a student can only provide sentence fragments in response to questions, the tutor helps the student link the fragments together to form a complete sentence, thus
promoting the student’s oral language development. The sentence will be reread by the student the following day, and the words in the sentence will be used for word sorts in subsequent lessons. A child’s own thoughts and words are likely to be more meaningful to him or her than any supplied by a tutor; therefore, the child is more likely to remember the sentence the following day which helps in the rereading of it. Since most of the words in a first graders’ oral vocabulary are high frequency words, the sentences written will contain words that the student needs to learn. The tutor determines which sentence is written each day and has responsibility for grabbing sentences that contain words the student needs to learn.

The tutor records the sentence on his or her daily Lesson Record before helping the student write it, thus providing opportunity for the tutor to consider each word in the sentence. The tutor must decide which words the student already knows how to spell, or probably knows how to spell, which two or three are good candidates for segmentation into Elkonin boxes, and which are too long, too difficult or too irregular to help the student put into boxes at this time – these the tutor will simply spell for the student.

Beginning in Phase 3 and continuing into Phase 4, the purpose of the writing component is expanded to include sensitizing the student to text structure. This is accomplished by discontinuing the writing of sentences in favor of helping the student develop graphic organizers (Manoli & Papadopoulou, 2012) and Question Answer Relationships (Raphael & Au, 2005), still with each word spelled correctly.

**Component #5**

**Text-based Vocabulary, Phonics and Comprehension Instruction Using a New Text**

Strategies are mental processes that control human activity such as reading (N. Hoover, 2011). Skilled readers apply strategies automatically to ensure active meaning construction.
Skilled readers move through print quickly and efficiently, and monitor for meaning as they read. When they realize they do not understand what they have read they take steps to increase understanding, by re-reading, crosschecking meaning or by searching for contextual cues that may increase understanding. This overall awareness of what is understood or not understood is known as metacognition. Skilled readers are then able to make self-corrections as they recognize their own mistakes (Clay, 1993). Less skilled readers should be explicitly taught to use and articulate similar comprehension strategies as they read (Pressley, 2000).

Michael Pressley (2000) explains that the development of comprehension and the teaching of comprehension are both multi-componential and developmental. He summarizes the component processes of comprehension explaining that good comprehension depends on skilled decoding, vocabulary, prior knowledge and the use of strategies while reading. He recommends the explicit teaching of decoding skills and vocabulary meanings, the development of sight words through decoding, and using context cues to monitor decoding. He also recommends encouraging extensive reading, encouraging students to be active as they read, to ask why a text makes sense and to utilize the self-regulated comprehension strategies that good readers use. He stresses that teachers should directly and systematically teach self-regulated comprehension strategies that have been supported by research-based evidence including: prior knowledge activation, question generation during reading, the construction of mental images representing the meanings expressed in text, summarization, and analyzing stories into story grammar components. All of these strategies are designed to assist readers before, during and after they read to actively understand and remember text (Pressley, 2000) and all are included in Reading Rescue® lessons in keeping with a student’s Phase of tutoring.
He also recommends the explicit teaching of multiple strategies, citing the most well researched and prominent approach: Reciprocal Teaching (Palinscar & Brown, 1984), which Reading Rescue® tutors introduce in Phase 2 of tutoring and continue using. Reciprocal Teaching (RT) utilizes four comprehension strategies: prediction, questioning, seeking clarification and summarization. Using RT, a tutor or teacher explicitly teaches a student or students how to use these strategies actively as they read text. After reading a small portion of text, a teacher or tutor poses a question for the student based on the text and helps the student answer it. Then the teacher or tutor demonstrates how to summarize by proposing a summary for the segment of text they just read. The student is asked if anything in the text needs to be clarified; if the student responds with, “No,” the tutor calls attention to concepts in the text that may be vague or unknown to the student and explains them, or may suggest that later portions of the text might offer clarification. The tutor then makes predictions about the upcoming text. Eventually, the student takes on the role of the tutor with a section of text, enacting the reciprocal nature of the RT framework by carrying out the same four steps, at first with the tutor’s assistance and, eventually, independently (Palinscar & Brown, 1984).

Tutors within the Reading Rescue® program assist poor readers to develop and apply the previously described comprehension strategies that have been experimentally supported by researchers and are shown to be effective with beginning readers and writers. Tutors explicitly teach students through demonstration, modeling, and coaching of these processes throughout each of the four Phases of the program. In Phases 1 and 2 tutors help students comprehend at the literal, inferential and evaluative level through skillful questioning that promotes higher-level thinking, by providing meanings and spellings of new vocabulary words through sentence writing and reconstruction, and through talking about their understanding and interest of each
new book that is introduced. As previously mentioned, the writing component of each tutoring session helps to develop many essential skills for decoding and comprehension by “grabbing” a sentence, and developing graphic organizers. Students are encouraged to talk about their understanding and interest as they progress through the texts. Tutors also provide the meanings and spellings of new vocabulary for each new book that is introduced.

In the early Phases, a Reading Rescue® tutor "grabs" a sentence the student says - usually in response to a comprehension question following the written record - and helps the student write it, spelling every word correctly. The tutor gives the student the spelling of difficult words and encourages the student to segment sounds in others that are appropriate for the student to segment, given his present ability. The tutor then requires the student to write the high frequency words that are in the sentence several times at increasing speeds to bring them to mastery. Students write each sentence only once on the "perfect page" with every word spelled correctly. A "practice page" is used for segmenting with Elkonin boxes and for the sight word work. The following day, the tutor returns with the sentence written the previous day printed out four times on a single page: one is cut-up and reconstructed in that lesson, another is sent home cut-up, a third goes home intact, and the fourth is pasted under the student's original - it's "published." Words from the reconstructed sentence are clipped to the page to be used in later lessons for word sorting activities.

By the time the student can write sentences with minimal help, usually toward the end of Phase 2 and into Phase 3, the texts are more challenging and reflect either a narrative or an expository structure. At that point, the tutor changes the nature of the writing from sentences to graphic organizers, which may take a few lessons to complete. As before, the tutor helps the student spell every word correctly, provides the spelling of long or difficult words, helps the
student segment others, and requires the student to write high frequency words several times to master them. By providing direct instruction in strategies of spelling, sentence writing and sentence reconstruction, tutors help to prepare students for later writing instruction in well known programs such as Self-Regulated Strategy Development (Harris, Graham & Mason, 2006) or Writers’ Workshop (Calkins, 1986). By assisting children in connecting early reading skills with writing, spelling and comprehension strategies, tutors in the Reading Rescue® program help to ameliorate future writing difficulties that can be intensified by waiting until later grades to address difficulties (Harris, Graham & Mason, 2006).

Reading Rescue® tutors assist students in the development of graphic organizers beginning in Phase 3 of tutoring in order to sensitize them to text structures and as another strategy to increase comprehension. Graphic organizers are visual representations of the way one might organize information within a body of text. One type of graphic organizer used following the reading of narrative texts is story mapping. Story maps call attention to the main elements of stories, such as characters, time, setting, and plot (problem, actions, outcomes.) They help students to visually represent key information using a specific structure (Boulineau, Force, Hagan-Burke & Burke, 2004) and highlight significant relations within a story. Graphically representing these elements on a written page is thought to allow students to achieve a greater understanding and memory of the reading (Gardill & Jitendra, 1999). As Pressley (2000) suggests, story maps can be utilized before, during and after reading a passage or story. Reading Rescue® tutors encourage students to use their understanding of story structure before reading to activate prior knowledge and to help develop a purpose for reading. As they read, students are encouraged to link information on the page to their existing cognitive knowledge structures or schema. An understanding of story structure is thus used during reading to help guide students
through texts and help monitor comprehension. Finally, story maps are used after reading a narrative to facilitate summarization of the most important ideas (Boulineau et al., 2004; Gardill & Jitendra, 1999). The completion of story maps and the development of graphic organizers takes the place of writing simple sentences beginning in Phase 3 of tutoring.

While story maps are used to facilitate comprehension of narrative texts, semantic maps are used to enhance comprehension of expository texts. Expository texts often are more challenging to students because they may contain more unfamiliar vocabulary and more complex relations between elements of the text (Kim, Vaughn, Wanzek, & Wei, 2004, Manoli & Papadopoulou, 2012). Semantic maps are usually web-like organizers, often used to represent words and ideas arranged around a central key word depicting connections and relationships of the part to the whole (Iranmehr, Davari & Erfanie, 2011). The use of semantic maps can help tutors and students highlight key vocabulary words and provide a link between what students know and what they will learn. Reading Rescue® tutors use semantic maps in a cooperative fashion with students before, during and after reading to help connect a child’s prior knowledge (schema) with the text base on specific topics to help enhance comprehension with information-based texts (Anderson & Pearson, 1984; Kim et al. 2004; Vaughn & Edmonds, 2006).

Also beginning in Phase 3, tutors teach Question Answer Relationships (QARs) to assist children in understanding story grammar or the structure of expository texts. Questions can include literal questions to answers that can be found in the text, questions that demand answers gathered from several parts of the text, questions that require inferencing based on prior knowledge, and questions that rely solely on the prior knowledge of the student. While there is some research to support the specific QAR framework, the concepts behind the questions and answers are strongly supported within current developmental research (Pressley, 2000). In Phase
4 tutors utilize the concepts outlined Reciprocal Teaching in a conversation with the student (N. Hoover, 2011).

Think-aloud procedures are utilized by tutors to assist students in learning how to apply the multiple strategies that are introduced throughout the Reading Rescue® Phases. A Think-aloud is a metacognitive technique or strategy in which a teacher verbalizes thoughts aloud while reading a selection orally, thus modeling the process of comprehension (Block & Israel, 2012). Pressley & Afflerbach (1995) explain that good reading is constructively responsive. Good readers are always changing their processing in response to the text they are reading, resulting in complex processing. By encouraging students to think aloud, teachers, tutors and researchers can develop a rich description and understanding of cognitive and affective processes during reading. By modeling and scaffolding the think-aloud process tutors can help less skilled readers to understand when and how they might use the multiple strategies that skilled readers do (Block & Israel, 2004).

Highly skilled readers use strategic thought processes before, during, and after reading. They (a) adjust a reading goal according to their level of prior knowledge, (b) think strategically, (c) follow their intentions to the end of a passage, (d) monitor their comprehension, and (e) reflect on an author's purpose within the constraints of a particular genre and their own reading objective (Pressley & Afflerbach, 1995; Block & Israel, 2004; Ortlieb & Norris, 2012). Reading Rescue® tutors are encouraged to scaffold the use of effective comprehension strategies in prediction, making inferences, visualizing, monitoring, awareness of story or expository structure and drawing conclusions. Students read aloud in the first lesson component, and in the last. If a tutor sees that a student needs help using one of the comprehension strategies that good readers use, the tutor pauses the student as he reads to demonstrate the strategy by thinking aloud.
It is important for the tutor to demonstrate the types of questions good readers might ask themselves and then allow the student to participate in the active thinking process to help develop strategies that will allow the student to comprehend the text more efficiently.

As students gain skills and strategies throughout all four Phases of Reading Rescue®, many students are able to achieve grade level reading capabilities as assessed by standardized school assessments and Reading Rescue® assessments. Students that meet the criteria will be eligible for graduation from the Reading Rescue® program. Students are provided with five Easing Out sessions during which tutors re-administer the battery of individual assessments, this time on a post basis, and conduct a number of activities to help the student use the strategies developed in tutoring sessions with his or her classroom materials. Tutors also revisit the student’s many accomplishments: all the sentences written correctly, all the books read and reread, and all the sight words mastered. The overall goal is to help the student make a successful emotional transition out of the program, and to understand all of the progress made and all the skills and strategies acquired.

**Reading Rescue® and The Common Core Standards**

In recent years there has been a great deal of discussion about the Common Core Standards set for each grade level in English Language Arts and Mathematics. Many confuse the Common Core Standards with Common Core aligned curricula that is often hastily designed and assume that every student has to learn skills and strategies in a similar, somewhat confusing manner. However, the Common Core Standards simply define what all students are expected to know and be able to do by the end of each year of schooling, not how teachers should teach. “By emphasizing required achievements, the Standards leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics
should be addressed. Thus, the Standards do not mandate such things as a particular writing
process or the full range of metacognitive strategies that students may need to monitor and direct
their thinking and learning” (Common Core Standards, 2010, p. 4).

Reading Rescue® provides well-developed, researched, evidence-based assistance for
students to reach Common Core Standards for English Language Arts. As we have clearly
outlined within the previous sections of this paper, tutors expertly address all of the foundational
skills listed in the Common Core Standards: Understanding of print concepts, phonological
awareness, phonics, word recognition, and fluency. Along with classroom instruction received
by students, Reading Rescue® tutors help struggling students to address components of the
reading standards for literature and informational text including key ideas and details, craft and
structure, integration of knowledge and ideas, and increasing students’ levels of text complexity.
Tutors also address many of the beginning writing standards and language standards for
kindergarten and first grade readers throughout the Phases of the program. Throughout the last
20 years, many students have successfully graduated from the Reading Rescue® program and
have achieved grade level reading ability as assessed by nationally normed and standardized
measures as well as the Reading Rescue®’s post assessments. The success of the program is
further demonstrated by the following experimental study conducted by leading researchers with
urban, language minority students attending the New York City Public School system.

Experimental Research on Reading Rescue®

The effectiveness of the full Reading Rescue® tutoring intervention model was explored
experimentally by leading researchers with 64 low-socioeconomic, language minority first
graders in New York City public schools. In the 2003-2004 school year, Linnea C. Ehri, Lois G
Dreyer, Bert Flugman and Alan Gross sought to experimentally investigate the effectiveness of
the Reading Rescue® program with real life students in some of New York City’s most challenged schools. They also examined the value of a variety of tutors implementing the program including: reading specialists, credentialed teachers and trained paraprofessionals (Ehri, Dreyer, Flugman & Gross, 2007). The researchers also sought to compare the effects of one-on-one tutoring with that of small group instruction.

The researchers expected the Reading Rescue® model to be effective because of previous research regarding its contributing components. The tutors were already employed by the schools, but received extensive training and supervision in the Reading Rescue® model. Those trained included paraprofessionals, reading specialists and credentialed teachers. The students were low-socioeconomic status, language minority first graders, testing at the lower end of the class based on Reading Rescue® individual assessments, the Gates MacGinitie Reading Test (4th ed.; GMRT4; MacGinitie, MacGinitie, Maria & Dreyer, 2000) and the Iowa Tests of Basic Skills vocabulary test (ITBS; H. Hoover, Dunbar, Frisbie, Oberley, Bray & Naylor et al., 2003). Instruction consisted of one-on-one intensive tutoring and covered the five components for effective reading intervention as quantified by the National Reading Panel (2000): phonemic awareness, phonics, fluency, vocabulary and reading comprehension.

The researchers wanted to see if struggling, language minority first graders would make greater gains with Reading Rescue® than with general education control groups or another small group intervention model. They also considered if tutored students would achieve grade level (or average) performance based on nationally normed, standardized tests. Finally, they considered whether paraprofessionals, credentialed teachers or reading specialists would have similar results in the tutoring of students (Ehri et al., 2007).
The term “language minority students” was defined as: students from homes where a language other than the predominant societal language is actively used. The students may be of limited second-language proficiency, bilingual, or essentially monolingual in the second language and proficient enough in the second language to be able to profit from classroom instruction conducted in that language (Ehri et al., 2007). Students judged by teachers to have virtually no knowledge of English and students receiving English language learner services were excluded from the study.

First graders in five schools were group administered the Reading Rescue® Classwide Screening Assessments, and lower performing students were tested individually on the Reading Rescue® individual assessments. Sixty-four matched pairs were established, with one student of the pair receiving the intervention and one receiving the general classroom instruction. Unbeknownst to the researchers, between the forming of the matched pairs and the beginning of the intervention, many of the schools assigned some of the same lower performing students to a small group intervention called Voyager Passport (Voyager Expanded Learning, 2004). Only students not assigned to Reading Rescue® were assigned to Voyager Passport. Fortunately, this allowed for another level of reading intervention not previously considered, but also reduced the number of students within the assigned control group that received no intervention. In order to accommodate this, low performing students from three comparable schools that were not utilizing any intervention model were selected for an additional control group (Ehri et al., 2007). Final participants in each group included 64 students receiving the Reading Rescue® intervention model, 52 students receiving the small-group Voyager Passport intervention model and 70 participants that did not receive either intervention. All students in each group were considered to be low socioeconomic status, language minority, and low-performing readers as assessed by
Reading Rescue® assessments and standardized measures. Tutors included 17 certified reading specialists, 15 adults certified in some other area (guidance counseling, math or social work) and 27 paraprofessionals that did not have full teacher certification or masters degrees.

The tutoring in this study consisted of “Easing In” sessions and instructional tutoring sessions. The tutors, as guided by the Reading Rescue® program, determined each tutoring session. The tutors kept careful records of student progress and the activities completed during each tutoring session. Each lesson taught phonological awareness, phonics, fluency, vocabulary development and comprehension, as discussed previously. Students read texts ranked for difficulty from the Ready Readers series (Juel, Hiebert, & Englebretson, 2003). Books were read and re-read during the first lesson component so that students could practice their newly found decoding skills and work on sight word knowledge. Reading Rescue® tutors were assessed for fidelity to the tutoring process through self-completed lesson record sheets, and by observation rubrics completed by independent scorers.

Students assigned to the Voyager Passport small group intervention received daily scripted instruction for 26 weeks. Sessions consisted of small groups (three to six students) for 30-40 minutes daily. Instruction included phonemic awareness, phonics, daily story reading, vocabulary, reading and listening comprehension and fluency. General classroom instruction also included analytic phonics instruction (letter sound correspondences discussed as they occur, not in a systematic, specific way) and word identification strategies utilizing analogy to previously known keywords.

Posttests included two Woodcock-Johnson subtests (WRMT-R word identification test and word attack test, 1998) as well as repeating pretests and posttests utilizing the Gates
MacGinitie word decoding and comprehension assessment (2002), and the Reading Rescue® assessments including the Ekwall/Shanker Individual Reading Inventory (2003).

In analyzing the results it was determined that before intervention commenced, none of the groups differed significantly from any other group based on the standardized and Reading Rescue® Individual Assessments (used as pretests.) Correlations between the Reading Rescue® pretests and the GMRT-4 were as high as $r = .69$ for developmental spelling and $r = .67$ for sight word reading, indicating a strong positive correlation between Reading Rescue® individual assessments and standardized measures. Subsequent results showed significant effects in decoding and comprehension for the Reading Rescue® model above and beyond the Voyager Passport small group intervention and any of the control group’s general classroom instruction. Overall, Reading Rescue® tutored students rose to the 50th percentile in decoding words and to the 38th percentile on reading comprehension with the average of students achieving a grade level of 1.9 (1st grade, 9th month.) With the understanding that all of the students that received tutoring were well below grade level and below the 25th percentile in decoding and reading comprehension at the beginning of the intervention, the results are astoundingly positive for the Reading Rescue® one-on-one tutoring model. No other intervention or instruction showed any results that approached the statistical significance of the Reading Rescue® tutoring model. Reading Rescue® was able to reestablish a majority of the struggling readers in the program close to or above grade level. Effect sizes favoring Reading Rescue® over the small group Voyager Passport and no intervention were large at .70 and .74 respectively. These results clearly showed that Reading Rescue® tutoring helped struggling first grade readers significantly more than small group intervention or no intervention.
Tutors were also assessed on their effectiveness; however, few effects of tutor type were detected. This indicated that paraprofessionals were equally as effective as credentialed teachers. However, reading specialists still achieved the best, most efficient results. Paraprofessionals took more sessions to work with struggling readers to achieve similar results, which may suggest that they were less effective, but only in terms of time and not overall accomplishment of the reader.

**Conclusion**

It is argued that many students do not need explicit instruction in letter recognition, phonemic awareness and phonics. Many children naturally crack the alphabetic code and easily figure out the phonic rules and generalizations that are helpful, possibly without even realizing what they are doing. Many teachers were often good readers who didn’t need the intense breakdown of sounds and grapheme-phoneme correspondences that accompany the type of tutoring within Reading Rescue®. Many schools and classrooms successfully implement meaning-based reading programs that take a whole language or balanced approach where students are simply exposed to words or texts and begin to read in, what appears to be, a seamless fashion. Many general education reading programs emphasize the joy of reading and encourage readers to “get lost” in the pleasure of stories.

However, a student who struggles with the basics of reading does not find much joy in the process. Teachers and parents are often overheard saying, “But, he is so smart!” as they strive to understand how an otherwise intelligent child has difficulty picking up what seem to be very simple concepts. It is difficult for adults and good readers to understand the challenges many children have in attempting to translate the symbols on a page into understandable words, sentences and paragraphs. Often, it will be suggested that these struggling readers have reading or learning disabilities, but this is usually not the case. Some children simply need a more
explicit introduction to the concepts of reading that other children seem to naturally acquire. Successful tutors of children who struggle learning to read are aware of the component processes that add up to skilled and fluent reading and explicitly instruct their students in the successful acquisition of these connected processes. Reading Rescue® provides a strong, evidence-based, systematic pathway for early struggling readers to fully understand and combine each component of the reading process. Reading Rescue® tutors help students understand phonemic awareness and phonics, combine vocabulary knowledge with prior knowledge and lead readers on to fluency and comprehension. Learning to read is the most important task any young student can accomplish. Reading Rescue® tutors play a leading role in helping struggling readers become fluent readers by helping to save each child, one by one.
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